DOCUMENT RESUME

ED 239 149 CG 017 193

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TITLE Choice of Friends over the Life Span: Developmental and Environmental Influences. Report No. 345.
INSTITUTION Johns Hopkins Univ., Baltimore, Md. Center for Social Organization of Schools.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE Jul 83
NOTE 120p.; Figures may be marginally legible due to small print.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Age Differences; *Educational Environment; *Friendship; Individual Characteristics; Interpersonal Attraction; Peer Relationship; Predictor Variables; Racial Factors; Sex Differences; *Social Development; *Social Environment; Social Networks

ABSTRACT

Previous research on friendship selection has failed to focus on how the selection process changes with age or in differently organized environments. This review of the literature takes a life-course perspective on the selection of friends, charting research results on three aspects of the selection process: (1) the number of friends and their proximity; (2) the visible features of friends such as age, sex, and race; and (3) characteristics of friendships and similarity of friends. Over 250 references were reviewed to examine how selection patterns change with age and under different environmental settings from preschool to postsecondary school settings. The results revealed important developmental patterns. With age and the development of cognitive skills and experiences, older students tend to choose fewer best friends, make choices from wider boundaries, increase cross-sex choices, decrease cross-race choices, move toward mixed-age choices, reciprocate and stabilize friendships, and choose more similar friends. There were also important environmental effects on the choice of friends. For example, elementary, junior high, and high schools may be organized to reward or to ignore or punish cross-race or mixed-age choices of friends; or to emphasize differences or similarities among students. These and other environmental conditions affect selection in ways that revise expected patterns of choosing friends. (Author/JAC)

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Report No. 345
July 1983

CHOICE OF FRIENDS OVER THE LIFE SPAN: DEVELOPMENTAL AND ENVIRONMENTAL INFLUENCES

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Grant No. NIE-G-80-0113

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This report is a preprint of a chapter prepared for the SRCD Study Group volume, Peer Relations: Process and Outcomes, edited by Edward Mueller and Catherine Cooper, (New York: Academic Press, forthcoming).

Published by the Center for Social Organization of Schools, supported in part as a research and development center by funds from the National Institute of Education (NIE), U.S. Department of Education. The opinions expressed in this publication do not necessarily reflect the position or policy of the NIE, and no official endorsement by the Institute should be inferred.

CG 017193

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Printed and assembled by the Centers for the Handicapped
Silver Spring, MD

Introductory Statement

The Center for Social Organization of Schools (CSOS) has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through three research programs to achieve its objectives. The School Organization Program investigates how school and classroom organization affects student learning and other immediate outcomes of schooling. Current studies focus on parental involvement, microcomputers, use of time in schools, cooperative learning, and other organizational factors. The Education and Work Program examines the relationship between schooling and students' later-life occupational and educational success. Current projects include studies of the competencies required in the workplace, the sources of training and experience that lead to employment, college students' major field choices, and employment of urban minority youth. The Schools and Delinquency Program researches the problems of crime, violence, vandalism, and disorder in schools and the role that schools play in delinquency. Ongoing studies address the development of a theory of delinquent behavior, school effects on delinquency, and the evaluation of delinquency prevention programs in and out of schools.

CSOS also supports a Fellowships in Education Research program that provides opportunities for talented young researchers to conduct and publish significant research in conjunction with the three research programs.

This report, prepared by the School Organization Program, summarizes research on the selection of friends from early childhood through adulthood.

Choice of Friends over the Life Span: Developmental and Environmental Influences

ABSTRACT

This paper takes a life-course perspective on the selection of friends. It charts research results on three aspects of the selection process: (1) facts of selection--the number of friends and their proximity; (2) the surface of selection--the visible features of friends such as their sex, race and age; (3) the depth of selection--characteristics of friendships and similarity of friends. Over 250 references are reviewed to learn how patterns of selection change with age and under different environmental conditions from preschool to postsecondary school settings.

The research reveals important <u>developmental patterns</u> in the selection of friends. With age and with the development of cognitive skills and experiences, older students tend to choose fewer best friends, make choices from wider boundaries, increase cross-sex choices, decrease cross-race choices, move toward mixed-age choices, reciprocate and stabilize friendships, and choose more similar friends. There are also important <u>environmental effects</u> on choice of friends. For example, elementary, junior high, and high schools may be organized to encourage wide or narrow contacts; to reward, ignore or punish cross-sex, cross-race, or mixed-age choices of friends; or to emphasize differences or similarities among students. These and other environmental conditions affect selection in ways that revise expected patterns of choosing friends.

Ideas for new research are presented that stress the importance of developmental and environmental factors in studies of friendship selection and influence.

CHOICE OF FRIENDS OVER THE LIFE SPAN: DEVELOPMENTAL AND ENVIRONMENTAL INFLUENCES

Joyce L. Epstein

INTRODUCTION

Friends are not selected at random. Nor are they selected on the basis of one individual's preferences and decisions. Friends are not selected the same way or for the same reasons by young children and adults in every social setting. Research is often presented, however, as if the selection of friends were random, ironically asocial, similar over the life course, and generalizable across environments. One reason that friendship choice has been poorly understood is that research has not focused on how the selection process changes with age or in differently organized environments.

This paper discusses research on three aspects of friendship selection. First, we consider the facts of selection -- the presence of friends and their location. The number of friends chosen, the number of isolated students, and the proximity of students are three facts about selection that establish the existence of friends, place the friends in context, and permit more detailed analyses of the selection process. Second, we review results of research on the surface of selection -- the visible features of friends. Sex, race, and age are three primary characteristics on which students base their selections of friends. We look at the extent of same- or cross-sex choices, same- or cross-race choices, and same-

or mixed-age choices of friends from preschool through adulthood. Third, we examine the details of the depth of selection -- the characteristics of friendships. The reciprocity and stability of choices and the similarity and dissimilarity of friends are characteristics of selection that determine the quality and longevity of friendships. These are variables that link the selection and influence processes.

The results of research are summarized on several charts and are discussed in terms of the developmental patterns and the environmental conditions that affect selection. It is important to interpret the charts cautiously. The studies differed widely in methodological style and sophistication. Few were rigorously empirical. Few used comparable measures to study the same age groups, different age groups, or comparable subgroups. Terms differed, so that the definition of a friend in one study was the definition of a best friend in another. Time frames in studies differed, so that the intervals of stability of friendship choices ranged from two weeks to a year or more. Very few studies obtained information about the environments in which the friendship choices were made. Few studies were both longitudinal and developmental, and most that included several grade levels treated the students as a single group. Thus, students from grades 9 through 12 were treated often as a single group of high school students, and not as separate groups of freshmen in a transition year, sophomores, juniors, and seniors in a different year of transition. Very few studies measured environmental conditions. In most cases, the schools and classrooms were not studied for different organizational schemes that would affect student interaction and selection of friends.

The synthesis of results from diverse studies cannot take the place of coherent, longitudinal studies with normative, developmental data on friendship selection, maintenance, dissolution, and reselection. Nevertheless, patterns emerge from the disparate studies that illustrate how developmental and environmental conditions affect selection.

I. THE FACTS OF SELECTION

NUMBER OF SELECTIONS

The number of friends and the absence of friends are basic facts for the study of selection. Numbers establish that choices are made and provide information on the breadth of students' social networks. Not all students choose friends or are chosen by friends. Some may be isolated, rejected or ignored by other students; others may elect to remain separate from the available group. Measures of isolation are important because they indicate the cohesiveness of groups, and because they may be used to identify students who have portentous social problems and who require special training in social skills (Asher, Oden, and Gottman, 1977; Asher and Renshaw, 1981). Figures 1 and 2 show that there are developmental and environmental conditions that affect the number of friends selected and the prevalence of isolates.

Developmental Patterns

Number of selections. Figure 1 arrays results from studies of the number of friends of students from preschool through high school to adulthood. Across the grades, students select, on the average, about 4 to 6 best friends. Elementary school students had an average of 5 best friends, with a range from 2 to 8 best

friends (Hallinan, 1976, 1980). About 6 best friends were selected by Australian students in grades 4 through 6 (Dunphy, 1963). At the high school level, an average of 4 to 5 same-sex, best friends were selected (Cohen, 1977; Hansell, 1981; Weiss and Lowenthal, 1975), with only about 9% of the students choosing more than 6 close friends (Cohen, 1977).

Figure 1 About Here

There is some indication that the number of close friends selected is curvilinear over the school grades. Leinhardt (1972) compared selections of children from prekindergarten to grade 6 and found that very young children made fewer selections of close friends than did the children in upper elementary grades. Epstein (1983b) reported that significantly more best friends were chosen by sixth graders than by twelfth graders. Lerman (1967) reported that the size of close friendship groups increased among 14- to 16-year-olds in urban areas but then decreased to pairs (two students) after age 16. This dramatic decrease is not evident in most other studies. For example, adults selected 3 to 4 close friends or more (Booth, 1972; Caldwell and Peplau, 1982; Laumann, 1973; Reisman, 1981; Weiss and Lowenthal, 1975). Across the years of adulthood, young adults chose slightly more friends and met them more frequently than did older adults (Reissman and Shorr, 1978; Steuve and Gerson, 1977).

The curvilinear pattern in numbers of friends selected -- fewer close friends for very young students and for late adolescents and adults, with the most friends selected by preadolescents -- may be explained by in part cognitive changes in concepts of friendships, perceptual skills, and accumulated experiences with friends, including the recognition of increased demands of mutual friendships.

Figure 1. Number of friends selected in elementary, junior high, and high school grades, and in adulthood

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOPMENTAL TRENDS	Average of 4 best friends; fewer selected in prekindergarten than in grade 6. Leinhardt, 1972.								Average 6.2 friends selected as members of cliques. (Australia) Dunphy, 1963.						
			Best friend choices spread among more children in grade 3 than in grade 1. Rardin & Moan, 1971.			Average of 5 best friends in elementary and junior high school, with a range of 2-8. Hallinan, 1976, 1980.					Average of 5.2 best friends in high school, Cohen, 1977. Average of 4.8 close friends in high school. Weiss & Lowenthal, 1975. Average of 3.93 best friends (range 1-8) in private high school. Hansell, 1981.				Between 3-4 close friends chosen by adults. Booth, 1972; Caldwell & Peplau, 1982. Over 60% of adult men named 1 to 4 close friends. Laumann, 1973.
			7-year olds contact an average of 32 children each day. Fine, 1980.						Between 3.36 and 2.92 choices received as best friend over a two-year period. Horrocks & Benimoff, 1966. Over grades 6, 7, 9 and 12 younger students select more best friends; older students select from wider boundaries in school. Epstein, 1983a, b.		Size of close friendship group decreases to pairs after age 15. Lerman, 1967. Teenagers have increasingly smaller out-of-school groups of friends. Montemayor & Van Komen, 1981.				Differences noted across the adult years with an average of 7.6 close friends reported by newlyweds, 4.7 for parents of teenagers, and 6.0 for preretirement and older adults. Weiss & Lowenthal, 1975. About 6 close friends. High of 19 and low of 15 friends selected by 17 to 60 year olds. Younger adults choose slightly more friends, and meet friends more frequently. Reisman & Shorr, 1978; Steuve & Gerson, 1977.
ENVIRONMENTAL CONDITIONS	High participatory activities create more social interaction among more children than do individual, table activities, and affect the number and kinds of contacts. Charlesworth & Hartup, 1967.					Smaller number of cliques in more open elementary classes, suggesting less exclusive friendships. Hallinan, 1980.			Students who participate in extracurricular activities in high school select more friends than nonparticipants. Karweit, 1983. College track students have more extensive network of friends than non college track. Hansell & Karweit, 1983.						Marriage, parenthood, retirement, widowhood place adults in different environments and affect number of friends selected at different ages. Blau, 1961.
									Students in high-participatory schools make more choices of best friends in grades 6, 7 and 12, suggesting less exclusive friendships. Epstein, 1983b.						

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Children in the middle years stress the importance of activities they enjoy with any friends, whereas adolescents stress the importance of the loyalty and commitment of particular friends and the quality of their friendships (Bigelow and La Gaipa, 1980).

The number of <u>different</u> students who are selected as friends increases over the school years. More and different students were chosen as best friends in grade 3 than in grade 1, as students spread their choices more realistically (Rardin and Moan, 1971). Over time there should be fewer "stars" and fewer unchosen "isolates" if students learn to share close friendship with one or two others. The number of choices <u>received</u> by particular students can change even if the number of choices <u>made</u> by a group of students remains the same. Which measure is counted -- number of choices made or received -- affects our knowledge about students' selections and also determines the kinds of questions that can be asked about how friends' influence each other.

In addition to best friends, students have other friends who are members of cliques and groups. A clique includes from 3 to 9 friends who select each other in an interlocking network of choices. A crowd is an association of cliques, with up to about 30 members. Students' cliques are likely to meet and interact in school daily, whereas crowds interact mainly outside of school and on weekends (Dunphy, 1963). The little information that is available suggests that older students are more likely to be members of cliques than are younger students (Cohen, 1977). Being a member of a clique may extend the number of choices of friends made and received among clique members or may limit the number of friends because of boundaries built between cliques and out-of-group members.

Isolates. Figure 2 reports patterns of isolates across the years. The percent of isolates is low when the measure of isolation is choosing friends (i.e. naming no friends). About 2% of young children and 3% of adolescents and adults were isolates-as-choosers (Reisman and Shorr, 1978). The rate of no choice of best friends was higher than no choice of friends. Epstein (1983b) reported about 15% of secondary students made no choice of best friends in school. The percent of isolates is higher when the measure of isolation is being chosen as a friend (i.e., being named by no one as a friend). Between 6% and 11% of elementary students received no choices as friends (Gronlund, 1959).

Figure 2 About Here

There is greater isolation from cliques than from friendship dyads. Hallinan (1976) found few cliques in most elementary classrooms, but, when they did exist, many more students were excluded from cliques than from dyadic friendships. Cliques were more frequent in high schools (Cohen, 1977), but even among older students the mathematics underlying the selection and isolation processes assures that youngsters are more likely to be friends with one other student than to be members of a clique characterized by mutual choice among three or four friends. Thus, more students are excluded from cliques than from dyadic friendships.

There are no clear developmental trends in isolation across the school years because of the absence of comparable measures in studies across the grades. Among adults, however, fewer young adults are isolates than older adults (Fisher and Phillips, 1981; Laumann, 1973). Young adults tend to participate more than older adults in work environments, clubs, schools and other community settings and, thereby, have more opportunities for social contacts. The number of isolates

Figure 2. Isolation of students in the elementary, junior high, and high school grades, and in adulthood

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOPMENTAL TRENDS					6% of upper elementary grade children had no friend; 12% had one friend. Gronlund, 1959.			25% of students are not chosen as best friend; only 5% of students are not chosen over a 2-year time period. Horrocks & Benimoff, 1966.							Fewer isolates among young adults than older adults. Lauman, 1973.
								About 15% of students in grades 6-12 made no choice of friends in school. Epstein, 1983b.							
					Estimated 2% isolates in childhood; 3% isolates in adolescence and adulthood. Kaisman & Shorr, 1978.										
	Children who have highly negative interactions with teachers and children who are daydreamers are more isolated by other students. Gottman, 1977.					More students isolated from cliques than from dyadic choices of friends. Hallinan, 1979.									Adult isolates increased with age, especially among men. Fisher & Phillips, 1981.
															4% isolates (chose no friends); 19% have few contacts and want more. Rosow, 1967.
															9% isolates among older adults. Pfeiffer, 1977.
ENVIRONMENTAL CONDITIONS						Fewer isolates in more "open" elementary classrooms. Hallinan, 1976.		Fewer isolates in more participatory secondary schools, grades 6-12. Epstein, 1983 b.							
										More "stars," more "isolates," and more separate cliques in high school classrooms that are low in cooperation and low in cohesiveness. Muldoon, 1955.					
											Participatory activities in class lead to fewer isolated 9th grade students. McClelland & Ratliff, 1947.				

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among adults ranged from 3% to 4% among young adults (Reisman and Shorr, 1978; Rosow, 1968), to about 9% among older adults. (Pfeiffer, 1977). Adults over 65 years old who retired or who had limited mobility in the community had fewer opportunties than young adults for social contacts (Chown, 1981).

Children who do not choose friends or are not chosen by other students may not be "true" isolates. They may be temporarily in a period of reselection, after losing or dropping a previous best friend; or, they may be members of a large group of friends in which none are considered "best"; or, they may not yet be sure of the qualities that define a "best" friend; or, they may not choose to choose the students who are available in a particular school or grade; or, they may have friends outside of school who cannot be listed when the instructions of a sociometric measure request the names of friends in a school, grade, or classroom. On the other hand, there are some "true" isolates. Gottman's (1977) study of preschoolers revealed, for example, that children who had frequent negative interactions with the teacher, and children who were daydreamers or "tuned out," tended to be rejected by and isolated from other children.

Horrocks and Benimoff (1966) showed how the timing of measures of selection made a difference in the prevalence of isolates. They reported that 25% of the students in grades 7-12 were unchosen as best friends, but only 5% were unchosen over a two-year period. The number of "true" isolates may be relatively small because, over time, most students without a friend seek and find one.

Other distinctions are made between students who are satisfied with one or few friends vs. those who are dissatisfied and wish for more friends. The former may not be isolated, and the latter may feel more isolated than they are. Reisman (1981) and Rosow (1968) made similar distinctions in identifying isolated adults.

Hartup (1983) reminded us that solitary play is a healthy, accepted behavior among preschoolers. Although total reclusion is unhealthy, solitary activities and few commitments to best friends may be preferred by some older children and some adults who appear isolated or unchosen by their peers.

Figures 1 and 2 contain entries that illustrate the problems of interpreting data on students' selections of friends. Few studies used exactly the same measures of numbers of friends, membership in cliques, or isolates. There is a critical scarcity of longitudinal studies that would clarify developmental patterns in numbers of students' friends. The suggested curvilinear trend makes sense, however. Very young children who have limited networks of friends and who have not developed concepts of close friendship probably choose relatively few close friends. Older adolescents who understand and practice the intense and time-consuming commitments of close friendship probably choose relatively few close friends. Children in the middle years of preadolescence select and reselect friends as they pursue active play and group games and activities. These children probably make more choices of best friends than either the younger or more mature students.

There are several ways that researchers collect information on numbers of friends. Students may be asked directly to estimate how many friends, best friends, or contacts they have. Or, various sociometric instruments may be used to obtain the names of students' friends or best friends. An estimated number, the actual names, a checklist of names, photographs of classmates, or other ratings of friends provide researchers with different kinds of information about the extensiveness of students' social networks, the hierarchy of strong and weak affiliations, or the numbers of friends selected for different academic or social

functions. If students are asked to name their friends, then researchers can go beyond the simple number of friends to ask the friends questions directly in order to learn more about the selection process. Observational records, videotaped interactions, and diaries of students' social contacts may be used to document details on the numbers and kinds of social exchanges in schools, classrooms, or other settings. Each type of measure has certain weaknesses (Hallinan, 1981), but a combination of methods can usefully address questions about the number of friends, their characteristics, changes that occur as school, classroom, and other settings change, and, over time, how particular friends (and different numbers of friends) in different settings influence each other.

Environmental Conditions

Number of selections. Students in differently organized environments have different numbers of friends. Studies conducted at the nursery, elementary and secondary school levels show how organizations can affect students' social ties. Charlesworth and Hartup (1967) reported that participatory activities (e.g. dramatic play) increased positive social exchange among nursery school children. In contrast, individualized activities (e.g. quiet work at tables) reduced social exchange. Rubin (1980) observed that a less-structured, child-centered nursery school organization created many small groups of friends with frequent changes in group membership. In contrast, a highly-structured, teacher-centered organization created a single, large group of students who focused a major amount of attention on the teacher.

Differently organized school environments promote or discourage the formation of cliques. Hallinan (1980) found fewer cliques in open elementary classrooms than in traditional classrooms. She suggested that less exclusive, more fluid

friendships among many students were made in open elementary classrooms. At the high school level, significantly more students were chosen as best friends in high-participatory secondary schools in three of the four grade levels studied (Epstein, 1983b). College-bound high school students had more extensive networks of friends than non-college-bound students, even though their numbers of close friends were similar (Hansell and Karweit, 1983). Students who participated in extracurricular activities at school chose and were chosen by more friends (Karweit, 1983).

Schmuck (1963, 1978) distinguished between student relations in classrooms with diffusely vs. centrally structured groups. He concluded that in diffusely structured classrooms -- many students receiving some choices rather than few students receiving many choices -- more students had high self-esteem and positive attitudes toward learning. Selection and acceptance as a friend in school may be linked, then, to positive personal and school behaviors. The point is that differently organized classrooms create conditions that promote diffuse or centralized social structures which assist or hinder teachers in accomplishing their teaching goals and assist or hinder students from developing positive attitudes and success in learning in school.

Adults are, over the years, in a variety of environments that affect the number of close and other friends they make and affect the frequency with which they interact with friends. Blau, 1961, discussed how events in adulthood such as marriage, parenthood, retirement, and widowhood alter the environments from which friends are selected. Other researchers have reported how the numbers of adult friends change with age, personal circumstance, and settings (Feld, 1982; Laumann, 1973; Reisman and Shorr, 1978; Steuve and Gerson, 1977; Verbrugge, 1977; Weiss and Lowenthal, 1975).

Isolates. The organization of classroom and school environments reduces or increases the number of students isolated from others. Fewer students were isolated in open elementary classrooms (Hallinan, 1976) or in high-participatory secondary schools and classrooms (Epstein, 1983b; McClelland and Ratcliff, 1947). When students participate frequently in activities with peers and are rewarded for doing so, they may be more apt to find at least one friend, and may be more able to replace lost friends. In contrast, there were more isolates in secondary school classes that were characterized by low cooperation or low cohesiveness (Muldoon, 1955). When students are separated, assigned permanent seats for extended periods, work individually, or are rewarded for passive or noninteractive behavior, they may be more restricted in finding a friend, or may have more difficulty in changing or replacing friends. If interaction in academic activities is not part of the classroom organization, more students may be omitted from the informal social networks that students build in schools.

It is debatable whether schools should provide coaching in social skills to a few isolated students or whether schools can do more to increase group cohesiveness and individual social skills by reorganizing the patterns of interactions of all students in academic activities in classrooms (cf. Asher, Oden, & Gottman, 1977; Epstein and Karweit, 1983; Oden and Asher, 1977; Putallaz and Gottman, 1981; for arguments on both sides of this debate). Coaching individual isolates places little or no emphasis on the organization of school activities for increasing numbers of friends or decreasing isolates. Reorganizing interaction patterns and purposes in schools and classrooms can affect students' selections of or isolation from other students.

The discussion of numbers of friends and isolated students raises the ancient question of how many friends is a good number. The answer, unclear to Aristotle, remains unclear today. One good friend may be enough to promote feelings of security or self-confidence; many friends and acquaintances may be needed to develop skills in communicating, negotiating, and problem solving. Epstein (1983c) showed that students who selected no best friends at school were no worse off one year later on several measures of academic and nonacademic attitudes and behaviors than students who selected low-scoring best friends; also, students who selected no best friends were better off on measures of self-reliance and college plans than students with stable, low-scoring friends. However, students who selected no best friends had significantly lower scores on most outcomes than students with stable, high-scoring friends. The importance of no friends or a number of friends depended on which friends were made and kept.

Students become more selective in their choices of friends as they learn more about themselves, about others, and about what they can expect from and give to a friendship. Older students participate in wider, more varied contexts, and meet and interact with many more students than do young children. Greater selectivity and wider circles of friends affect the selection process, restricting the number of best friends and extending the number of other friends and acquaintances. The number of best friends may decrease as older students become closer to a few special friends; at the same time, the number of friends and acquaintances may increase as older students make social contacts in wider boundaries. Number of friends, then, is related to the proximity of friends and potential friends.

PROXIMITY AND SELECTION

Proximity or propinquity was recognized in early research on children's friendships as a necessary but not sufficient condition for the selection of friends. Of course, in most instances, if students are not near each other, they will not meet, continue contact, nor become friends. But, many students who are in close and frequent proximity do not become friends, and very few become close friends. Which students are put in proximity, what they do together, and how they are rewarded for their interactions affect the selection process. Figure 3 arranges the results of studies of proximity and selection of friends along a developmental line and highlights environmental effects of proximity as a factor in selection.

Figure 3 About Here

Developmental Patterns

The meaning and functions of proximity change across the school years. Proximity means "security" to infants and toddlers, but changes to mean "play and shared activity" to older toddlers and preschool children (Maccoby and Jacklin, 1974; Selman, 1976).

The importance of proximity for social contact and play is affected by cultural traditions. For example, Pitts (1968) described how, in France, proximate preschool children did not play together until they obtained permission from their parents. The French parents granted permission mainly on the basis of the known or assumed sociometric status of the nearby child. Thus, for French children the direct connection between proximity and play was mediated by parental permission.

Three major settings -- home, school, and community -- define the boundaries within which children are in proximity. In each of these settings, differences in

Figure 3. Proximity and the selection of friends in elementary, junior high, and high school grades, and in adulthood

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOPMENTAL TRENDS															
Physical closeness to mother, father, teacher, peer defines social relationships for infants and young children. Studies reviewed by Maccoby & Jacklin, 1974.					Students and their friends live an average of .26 miles apart; students and their other classmates live an average of .92 miles apart. Seagoe, 1933.								Among adolescents and young adults, a crowd is composed of several cliques from proximitious neighborhoods. Dunphy, 1963.		
					89% of 62 pairs of chums live in same neighborhood. Furfey, 1929.	Preadolescents, aged 9-12, are generally tied to their neighborhoods for choice of friends. Fine, 1980.									Working class adults are more dependent on neighborhood for social friends than are middle class adults. Allan, 1979; Rosow, 1967.
								Older students react differently to proximitous sex and race subgroups than do younger students in their choice of friends. Older students make more cross-sex choices and fewer cross-race choices than young students. Epstein, 1983a, b.						
A friend is someone who is in proximity and shares activities. Selman, 1976.															Proximity of friends in neighborhoods is related to frequency of visits and social adjustment of elderly. Pihlblad & McNamara, 1962.

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Figure 3. cont. Proximity and the selection of friends in elementary, junior high, and high school grades, and in adulthood

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
ENVIRONMENTAL CONDITIONS															

Cultural differences affect the importance of proximity--e.g. play activities among young children in proximity are highly controlled by parents in France. Pitts, 1968.

Teachers change students' seats to find "ecological" solutions to problems of noisy social groups. Hrybyk & Farnham-Diggory, 1981.

In classrooms organized to emphasize seatwork and recitation, students' classroom friends tend to be seatmates. Bossert, 1979.

Older students select friends from wider boundaries in school, choosing more friends from outside their own teachers' classrooms. Epstein, 1983b.

School organizations that encourage students to move, regroup, and work together in classrooms, labs, or libraries, change the definition of "proximity" for students in school space. Epstein, 1983b.

Proximity is the result of structural layout and grouping practices. These factors affect the formation and composition of cliques as well as the selection of friends. Hallinan, 1980.

Soviet urban and rural youths differ in patterns of friendship, content of interactions, and satisfaction with friends. Kon, 1981.

Extracurricular activities put students in proximity and set up friendship opportunities among students from different curricular tracks who may not interact in academic classes. Karweit, 1983.

Proximity of college students in a residential dormitory affects friendship selection and influence. Newcomb, 1961.

In college classrooms, seat partners become friends and increase friendship over time more than other classmates. Byrne, 1961.

Choices of friends by production workers are more homogeneous than choices by sales workers because of different geographic boundaries from which friends are selected. Verbrugge, 1977.

Occupational groups select friends from different proximities. Low SES select kin more often; mid SES select neighbors more often; high SES select co-workers more often. Verbrugge, 1979.

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the organization of space and activities (e.g. the facilities, tasks, rules for attendance or behavior, purposes and rewards for interaction, architecture, size of group, spatial arrangments, and other locational or geographic qualities) affect the patterns of contact, interaction, and the selection of friends.

Very young children depend on their parents, siblings, neighborhood play groups, parks, local housing arrangments and other family and neighborhood conditions to put them in contact with other children. The neighborhood arrangements can be affected by broad cultural patterns of housing and work (Whiting, forthcoming). Also, within cultures, different housing patterns create natural variations in population distributions that affect young children's associations. For example, in the same culture, given the same number of potential friends per housing unit, youngsters who live in an apartment house, a neighborhood of row houses, a suburban sprawl of single family houses, and a rural farm community will have different patterns of contact and different numbers of friends. When children are in school, their proximity to other children is controlled by school and classroom organizations, but they bring with them different histories of friendships and different connections to few or many students that resulted from family and neighborhood factors.

Neighborhoods continue to define boundaries for students' friendships during the school years. Seagoe's (1933) early studies of students in grades 3 to 8 showed that students and their friends lived an average of .26 miles apart, whereas students and other classmates lived .92 miles apart. Furfey (1929) reported that 89% of elementary school students' friends were from the same neighborhood, and Fine (1980) found similarly high rates for preadolescents, aged 9 to 12.

No information is presented in most studies of developmental changes in the geographic distance between friends, but Epstein (1983a,b) reported clear trends for students from grades 6 to grade 12 in the widening of boundaries of selection within school settings. In the upper grades, students selected more friends from beyond their own teachers' classrooms. With age, students reassessed those who were in proximity. For example, although equal numbers of males and females were present and proximate at all grade levels, the numbers of cross-sex choices of best friends increased with age.

Allan (1979), Rosow (1967), and Verbrugge (1977) discussed the continued importance of neighborhoods for some adults (low SES, unskilled laborers) more than for others (high SES, white collar workers). Proximity of friends was considered an especially factor in the selection of close friends among the elderly (Chown, 1981; Pihlblad and McNamara, 1962).

The bits of evidence suggest that the definition of proximity changes as a result of age, social and emotional needs, school environments, and neighborhood and occupational characteristics. There is almost complete reliance by young children on physical proximity for the selection and definition of friends, but less reliance by young adults on physical proximity to define or maintain friendships. The closeness of most adult friendships dwindles when one friend moves away from the other (Allan, 1979), but, in general, adults maintain friendships over far greater distances for longer periods of time than do youngsters. There may be a return to increased importance of physical proximity for friendship selection among the elderly.

Environmental Conditions

Six school conditions affect the proximity of students and the potential selection of friends: demographic factors such as the sex, race and age compositions in the school and in classrooms; grouping policies such as tracking or within-class grouping on the basis of ability; instructional methods that encourage or discourage students to contact, help, and interact with the same or different individuals and groups of students during the school day; seating practices that limit students to one seat for the school term, or that encourage students to change their seats and their proximity to different students for lessons and projects; the organization of nonacademic activities such as extracurricular activities before, during, and after school; and the architecture of the school building, play yards, and other spaces that discourage or encourage small or large work and play groups.

Each of these factors puts particular students in close contact or in separate groups. Each emphasizes or deemphasizes fluid movement and exchange among many students. Each factor establishes whether, when and why students in proximity meet, work together, learn about each other, and become friends. The importance of several of these school factors on selection of friends is discussed in other sections of this paper. Here we focus on seating practices -- a clear condition of physical proximity of students in classrooms.

Seating proximity affects friendship selection at all grade levels (Bossert, 1979, Hallinan, 1980). Seating partners, more than other students, exchange information about school work, share social comments, ask and answer each other's questions, and check each other's papers. Hrybryk and Farnham-Diggory (1981) reported (as all practitioners know) that teachers change students' seats if there

are problems with too much friendly behavior in class. The proximities of pairs or small groups of students are changed in order to maintain the teachers' need for non-friendly behavior during class time. This becomes a periodic procedure when students who become seatmates become friends and become annoying to teachers. Byrne (1961) found important effects of seating proximity on college students' selections of friends.

Seating arrangments may have subtle but important effects on the measurement of friendship choices. Foot, Chapman, and Smith (1980) suggested that children's choices could be affected by whom they see nearby as they look around the room when they are filling out sociometric forms. Children who are close in proximity may be named more often than others who are across the room, in another class, or absent from school even if those students are equally important as friends or best friends. If proximity has important effects on the measurement of friendship choices, then written choices or checklists of friends should be supplemented by observations or diaries of social contacts or other behavioral measures to document more accurately or more completely the number and the location of friends in school.

Several other studies illustrate the variety of ages and locations in which contrasting patterns of proximity produce patterns of selection of friends. These include: Kon's (1981) study of Soviet rural and urban youths; Karweit's (1983) research on extracurricular activity settings; Newcomb's (1961) classic documentation of the importance of arrangements in college dormitories, and Verbrugge's (1979) study of adult occupational settings.

Environmental factors that alter the proximity of students should have different effects on the selection of friends at different age levels. School factors

that affect proximity should have stronger influence on patterns of selection among elementary and junior high school students than among high school students and adults because younger students form and change friends more frequently. Environmental conditions that affect proximity should have stronger influence on selection during times of transitions or upheavals (e.g. when students enter new and larger schools, or move to new communities, or when adults start new jobs) than during times when students or adults remain in familiar environments.

Many studies of adults have addressed issues of social distance, personal space, and interpersonal boundaries (Altman, 1975; Laumann, 1973). We are suggesting that differently organized classrooms create situations that bring more or fewer students into close and frequent contact. The tasks and assignments, seating arrangements, and locations of work places or learning centers revise personal boundaries and change the physical distance between diverse students as they work together. Future research on the boundaries that restrict or extend social contact must identify and clarify the variations in the functions and meanings of proximity at different age levels and under different environmental conditions.

II. THE SURFACE OF SELECTION

SAME AND CROSS-SEX CHOICES

The array of studies in Figure 4 suggests how developmental and environmental factors influence the selection of same- and opposite-sex friends.

Figure 4 About Here

Figure 4. Sex differences in the selection of friends in elementary, junior, and high school grades and adulthood.

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOPMENTAL TRENDS	No prevalence of same-sex choices; boys and girls are selected and valued by each other. Damon, 1977.					Same-sex choices predominate in elementary, middle, and high school, and adulthood. Campbell, 1964; Moreno, 1934; Tuma and Hallinan, 1979.									
	Cross-sex choices are more common among 2-5 year olds (PK-K) than among 6-9 year olds (grades 1-4). Gottman and Parkhurst, 1980.						75% same-sex choices. Eder & Hallinan, 1978.	65-75% same sex choices of best friend. Hallinan, 1978/7				91% same-sex choices in high school population. Kandel, 1978.			Same-sex choices predominate for college freshmen. Wheeler & Nezlek, 1977
												81% same-sex choices in private high school. Hansell, 1978, in Karweit & Hansell, 1983.			
												57% females and 43% males have opposite-sex friend (USSR). Kon and Losenkov, 1978.			Mainly same-sex best friends (Verbrugge; 1979), especially for middle-aged and older adults. Weiss & Lowenthal, 1975.
						Girls with "warm" personalities have larger friendship groups than girls with "aloof" personalities. Maas, 1968.									
						Boys with "warm" personalities make more cross-sex friendship choices than boys with "aloof" personalities. Maas, 1968		Some cross-sex choices of friends but no cross-sex clique memberships, Hallinan, 1980.				Almost exclusively same-sex friendship choices among French adolescents, Pitts, 1968.			
												Many same sex cliques: of 28 cliques, only 5 consisted of somewhat even proportions of males and females, and all had one of these mixed-sex cliques were juniors and seniors in high school. Hansell, 1981.			
						Heterosexual crowds of friends form in early adolescence; heterosexual cliques increase in later adolescence. Girls increase cross-sex choices in crowds and cliques sooner than boys. Dunphy, 1963.									
						Increased cross-sex choices in grade 10 compared to grades 3 or 6. Asher, Singleton and Taylor, 1982.									Young adults, 60% opposite-sex best friends; older adults, 18-30% cross-sex choices. Weiss & Lowenthal, 1975.
												Increasing cross-sex choices of best friends in the high school years. Douvan and Adelson, 1966; Duck, 1973b; Dunphy, 1963; Epstein, 1983a; Hollingshead, 1949; Montemayor and Van Komen, 1982.			
												Girls increase cross-sex choices over high school years more than boys. Epstein, 1983a, b.			
						Increase in written references to heterosexual relationships to explain termination of same-sex friendships. Bigelow & La Gaipa, 1980.									
												Boys say girls can be friends only if you love them. Damon, 1977.			
												Girls make more choices of boys than vice versa. Kon and Losenkov, 1978.			

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Figure 4. cont. Sex differences in the selection of friends in elementary, junior, and high school grades and adulthood.

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOPMENTAL TRENDS Cont.	Preschool boys had fewer close friends in nursery school setting. Clark Wyon & Richards, 1969.			After age 7 best friends are more "intensive" (one or two friends) for girls, and "extensive" (larger group of friends) for boys. Waldrup and Halverson, 1975.				Females have more reciprocated best friends in grades 6, 7, 9, and 12. Epstein, 1983.							Women stress reciprocity, and support in friendship men stress similarity and shared activities. Weiss & Lowenthal, 1975.
							Same numbers of choices by boys girls. Eder and Hallinan, 1978.				Females have more reciprocated friendships. Hansell, 1981.				No significant sex differences in numbers of intimate, good or casual friends. Caldwell & Peplau, 1982.
							More friends selected by boys. Tuma and Hallinan 1979.		2/3 females vs 1/3 males prefer to meet in pairs with friends. Kon, 1981.		Females have more reciprocated friends and those that are reciprocated are more similar in family and school status than unreciprocated friends. Karweit and Hansell, 1983.				Men and women report preference for spending time with small numbers of close friends, not large groups. Caldwell & Peplau, 1982
							Boys in larger groups are more competitive, settle arguments. Girls in smaller groups are less competitive, have fewer arguments. Lever 1976.			Older girls in smaller groups than boys or younger girls. Savin-Williams 1980.	Girls have more cliques than boys suggesting more exclusive friendships. Cohen, 1977.				Males and females choose equal numbers of close friends, but female associations involve more emotional sharing. Booth 1972; Caldwell & Peplau, 1981.
										Boys accept newcomers sooner than girls. Feshbach & Sones, 1971.	Girls new to environment have more difficult time making new friends than do boys. Damico, cited in Hallinan, 1980.				

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continued...

Figure 4. cont. Sex differences in the selection of friends in elementary, junior, and high school grades and adulthood.

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
ENVIRONMENTAL CONDITIONS	Prekindergarten practices that reward cross-sex cooperative play increase cross-sex choices of friends. Serbin, Tonick, Sternglanz, 1977.				Friendship and play groups almost exclusively same sex in 4 classrooms observed 21 weeks. Bossert, 1979.		Same-sex choices range from 75-99% in five classrooms. Eder & Hallinan, 1978.		Males entering middle and high schools (in transitions to new educational levels) have fewer reciprocated friends within their network of friends than do females. Epstein, 1983a,b. Females receive and make more choices of best friends, but no sex differences in number of choices in high-participatory schools. Males more often included in friendship choiced in high participatory schools. Epstein, 1983b.						
	Males given experience in child care responsibilities are more nurturant and prosocial in behavior than other males and more like females in other dyadic relations. Whiting, forthcoming.						In open classrooms boys make more dyadic choices; in traditional classrooms boys make more transitive, triadic choices. The structure of girls and boys are more similar in open than traditional classrooms. Eder & Hallinan, 1978.		More cross-sex helping behavior, in classrooms that use teams or games that require and reward cross-sex interaction. DeVries and Edwards, 1974. Fewer than 5% cross-sex seating patterns in middle school lunch room. Schofield, 1981.						
							Class size influences cross-sex choices with fewer cross-sex friends chosen in larger classes. Hallinan, 1979.		Groups in school are larger and include same-sex choices; groups out of school increasingly become smaller and heterosexual. Montemayor and Van Komen, 1981.						

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Developmental Patterns

Same-sex choices. By far, the most important surface feature of selection is the sex of the chooser and the chosen. Research conducted on students at all educational levels and on adults reports the predominance of same-sex choices, with same sex more important than race or age for the selection of friends (Campbell, 1964; Kandel, 1978; Moreno, 1934; Pitts, 1968; St. John, 1975; Schofield, 1981; Singleton and Asher, 1979; Tuma and Hallinan, 1979; Wheeler and Nezlek, 1977; Verbrugge, 1977). Parents and teachers may inadvertently or purposely socialize students to make same-sex choices if they restrict young children to same-sex playmates and work partners at home and in school.

There are many informative reports on the size of male and female friendship groups and on patterns of reciprocated choices. Preschool females made more choices of friends than preschool males (Clark, Wyon, and Richards, 1969), but after about age 7, males had more extensive, large-group associations than females (Maccoby and Jacklin, 1974; Savin-Williams, 1980; Waldrop and Halverson, 1975). This pattern continued in reports of 9- to 11-year-olds (Eder and Hallinan, 1978), but was not so clear or consistent in later adolescence. Montemayor and Van Komen (1982) reported that among 13- to 19- year-olds, males and females were members of similarly-sized groups in and out of school, and Caldwell and Peplau (1982) reported no significant differences in the numbers of intimate, good, or casual friends of college men and women. Some studies found that females made more reciprocated choices in the middle and high school grades and in adulthood (Epstein, 1983b; Karweit and Hansell, 1983; Hansell, 1981).

An interesting difference has been noted in the ease with which males and females make new, same-sex friends in new settings, or add new friends to existing

friendship groups (cf. Eder and Hallinan, 1978; Feshbach and Sones, 1971; Damico, cited by Hallinan, 1980; Epstein, 1983a). The results of the varied studies suggest that males make new friends or include additional friends in existing groups easier than do females. Little is known, however, about the processes that might explain the differences noted, or how experiences in different school environments affect the readiness with which new friends are made by males or females.

Observers of school behavior report that most informal interaction is between same-sex students. For example, in a middle school lunchroom, fewer than 5% of the freely-chosen side-by-side seats were selected by opposite sex peers (Schofield, 1981). Sitting next to someone of your choice at lunch may be a more exclusive selection than acknowledging friendly acceptance of male and female classmates on a checklist of names. Particular types of selections (such as choosing a seating partner, working on a joint project, or sending an invitation for a party) have different meanings from general sociometric measures of selection.

Cross-sex choices. The literature suggests a curvilinear, developmental pattern of cross-sex choices of friends. Very young children made frequent cross-sex choices (Damon, 1977; Gottman and Parkhurst, 1980), children in the elementary and middle school grades made almost no cross-sex choices (Bossert, 1979; Eder and Hallinan, 1978), and adolescents increased their cross-sex choices of friends (Douvan and Adelson, 1966; Duck, 1973b; Epstein, 1983a; Hollingshead, 1949; Montemayor & Van Komen, 1982). In written comments, older students discussed the importance of cross-sex friendships more than did younger students (La Gaipa, 1981). The students' written justifications help to explain how the observed, relative increase in cross-sex choices among adolescents becomes an accepted social pattern, even at the expense of same-sex choices of friends.

More cross-sex choices of friends are made than cross-sex choices of best friends. For example, Hallinan (1978/79) reported up to 35% cross-sex choices of friends among students who chose only same-sex best friends. There were more cross-sex choices of friends than cross-sex memberships in cliques (Hallinan, 1980). It is more likely that a dyadic cross-sex choice will be made than that a clique of three or four friends will all make the same cross-sex choices. Different rates of cross-sex choices will result from different measures of selection. When the measure enables respondents to report their friendly feelings towards all classmates or school mates, not just their closest friends, the extent of cross-sex choices will be higher than when they can list only their best friends.

Before 13 years of age, males and females did not differ in the extent of opposite-sex choices of friends (Maccoby and Jacklin, 1974). In adolescence, however, girls made more heterosexual choices than did boys (Epstein, 1983a,b; Kon and Losenkov, 1978), and girls' choices were often of older boys (Dunphy, 1963). Measures that require or provide names of friends in a students' own grade or classroom artifically minimize the extent of cross-sex choices, especially in adolescence when the heterosexual choices are often mixed-age (e.g. older males) and out-of-school friends.

Personality characteristics may influence the rate of cross-sex choices of friends. In Maas's (1968) study "warm" boys made more positive cross-sex choices of friends than did "aloof" boys, who tended to avoid cross-sex interactions. "Warm" girls had larger groups of playmates than did "aloof" girls. The provocative hypothesis is that environments which encourage warm and close relationships will change the way heterosexual relations and friendship choices are structured.

Environmental Conditions

Same-sex choices. The organization of classroom instruction influences the rate and acceptance of same-sex choices of friends. Eder and Hallinan (1978) reported that in traditional classrooms boys had less exclusive, more transitive triadic friendships than do girls. In more open elementary classrooms, males and females had more similarly structured friendships, and both males and females emphasize dyadic relationships. It may be that in more open classrooms, males (and females) have numerous opportunities to work together and to select a close friend during academic activities; in traditional settings, males may make numerous friends (but not necessarily close friends) in their nonacademic contacts with other boys in large group games. This interpretation of Eder and Hallinan's results makes a connection between the school or classroom organization and the influencial play-group structures.

Epstein (1983b) found that females made and received more best-friend choices than did males in traditional school environments, but males were more equally included in friendship choices in high-participatory environments.

Cross-sex choices. Three features of the environment that have been found to influence cross-sex choices of friends and patterns of interactions are early responsibility for nurturant behavior, numbers of males and females in a group, and the reward structures for cross-sex choices of friends.

Whiting (forthcoming) reports that boys who were given opportunities to take care of younger children were more nurturant in their dyadic relations than boys whose environments did not require or permit them to be responsible for child care. Nurturant behavior may be associated with greater acceptance of opposite-sex friends and the earlier development of reciprocated friendships.

The number of cross-sex choices is related to nursery school environmental factors, including the size of the group of playmates. Cross-sex choices were more common in small preschool classes than in large ones -- e.g. 10 vs. 35 students (Smith and Connelly, 1981). Hallinan (1979) also recognized that size of the classroom population affected cross-sex choices. Students in larger classes made fewer cross-sex choices than did students in smaller classes. This may be because students have more opportunities to choose among a large number of same-sex friends, or because the large number of students cause the teacher to use management strategies that emphasize the separation of boys and girls in classroom activities.

When cross-sex interactions were rewarded in classrooms (e.g. when teams or games required cooperation among male and female team members), more cross-sex helping behavior and friendships were made (DeVries & Edwards 1974; Serbin, Tonick, & Steinglanz, 1977). If the task and reward systems of the school or classroom provide official, structural support for cross-sex choices, then opposite-sex friends would be among the normative patterns of selection. Without institutional support, the individual's cross-sex choices would be based on personal decisions and justifications, and would not necessarily be understood or accepted by same-sex peers. Elementary school children's cross-sex choices of friends were more unstable than their same-sex friendships (Gronlund, 1959). This could be due to many factors, including the lack of peer and institutional support for cross-sex choices. Students may more quickly drop or dissolve friendships with opposite-sex friends if there is no positive support from others for the continuation of cross-sex friendships.

The research suggests that variables such as class size, proportions of male and female students, authority and reward structures in school, and responsibilities for child care at home can alter the expected patterns of cross-sex choices of friends. Environmental factors, not just biological ones, help to determine how boys and girls form same- and cross-sex friendships.

Other environmental factors have been examined for effects on same- and cross-sex choices. For example, in-school and out-of-school settings were studied by Montenagor and Van Komen (1981). Out-of-school groups were smaller and more heterosexual than in-school groups, especially for older students. Within-school settings (e.g. lunchroom vs classroom) were observed by Schofield (1981). She found few cross-sex choices in the lunchroom. These two examples illustrate the complicated links between proximity, association of students, and selection of friends. Greater numbers of students are brought together in schools than are usually found in neighborhoods. Larger groups may promote more same-sex association, in part because of school and classroom management strategies that divide females from males. The proximity of paraticular students may result from self-direction (in lunchrooms) or from assignment (in classrooms). Each type of proximity may have different implications for friendship choice.

Sex of student is often compared to race and age as an ascribed, visible, status variable which guides the choice of friends. Without exception, at all grade levels and in adulthood, being the same sex is more important for choice of best friends than being the same race or the same age. In adolescence, both males and females increase their heterosexual choices of best friends, but females increase their choices of males earlier and with greater frequency than males increase their choice of females (Kon, 1981). Girls' status with same-sex friends may

depend on their relations with boys at an earlier time than boys' status with same-sex friends depends on their cross-sex friendships (Schofield, 1981). Epstein (1983a,b) found more cross-sex choices by females than by males at the secondary school level. From the few studies that examined details of cross-sex choices, we get some insights into the subtleties of sex as a status variable. Sex of student may be an equal status variable for same-sex choices of friends, but an unequal status characteristic for cross-sex choices, with males more often chosen (and perhaps more highly valued) by females than females are by males. This hypothesis can be understood only with more specific studies of same- and cross-sex choices and valuations.

New research is needed on the developmental and environmental factors in schools and classrooms that encourage cross-sex acceptance and choices earlier than adolescence. Schools that support the separation of the sexes and reward (overtly or subtly) same-sex choices of friends should have students who, on the average, have different attitudes and behaviors than students from schools that support and reward cross-sex interaction and acceptance. We lack information on the long-term effects of early support in schools and classrooms for cross-sex choices on levels of interaction and types of influence of males and females on each other and on each other's attitudes (understanding, trust, appreciation) about the opposite sex.

SAME- AND CROSS-RACE CHOICES

Like sex, race is an ascribed, visible, surface characteristic that influences students' choices of friends. Although there is considerable discussion about the benefits in co-educational schools of exclusively same-sex friends for learning

sex-appropriate behavior (Fine 1981; Hartup, 1983; Maccoby and Jacklin, 1974), there is no analogous discussion of the benefits in desegregated schools of exclusively same-race friends. An accepted goal of integrated education is cross-race acceptance and choice of friends (St. John, 1975). The research reported in Figure 5 documents developmental and environmental effects on same-race and cross-race choices of friends.

Figure 5 About Here

Developmental Patterns

The importance of race as a criterion for choice changes across the school years. Very young children placed less emphasis on race in their choices of friends than did older children (Asher, Oden, and Gottman, 1977). Soon after school begins, however, same-race choices dominated students' selections. Same-race choices of friends increased from grade 1 on in several studies (Blanchard, Weigel and Cook, 1975; Carter, Detine-Carter and Benson, 1980; Criswell, 1939; Hauserman, Walen and Bahling, 1973; St. John 1975; Schofield, 1981; Tuma and Hallinan, 1979) reported that 5- to 8- year-olds made fewer racial distinctions in selection than older children, but 9- to 13- year-olds selected friends of their own race when they sought recognition and support in social and academic activities.

Most studies report that fewer cross-race choices of friends are made by high school students than by elementary students. There was a decline over time in cross-race choices in the elementary grades (Hallinan, 1982; Singleton and Asher, 1979) and in the secondary grades (Asher, Oden, & Gottman, 1977; Epstein, 1983a). Hartup (1983) discussed a British study that showed a large decrease in cross-race choices of friends at the time of transition to the secondary level.

Figure 5. Same race and cross-race choices of friends in elementary junior high and high school grades and adulthood.

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOPMENTAL TRENDS					Racial acceptance, if not friendship, prevalent for 3rd graders. Asher, Oden, & Gottman, 1977.	Same-race choices predominate. Tuma and Hallinan, 1979. Almost 50% of black and white students report out-of-school activities with other races; 30% black and white students visited each others' homes (compared to 50% same-race visits). Patchen, 1982.			Same-race choices become more prevalent in pre-adolescence. Moreno, 1934; Schofield, 1981; St. John, 1975.			Fewer cross-race choices in high school become more prevalent. Asher, Oden & Gottman, 1977. 60%-70% same-race choices. Kandel, 1978.			
					No difference in numbers of friends chosen or rate of reciprocations of black and white students in grades 6, 7, 9, 12, but white students' friendships more stable over 1 year. Epstein, 1983b.										
					Increased own-race choice of social friends from kindergarten to grade 4. Increase in white students own-race choice for academic work partners from K to 4. Bartel. Bartel, & Grill, 1973.										
									Decrease in cross-race choices over grades 3 to 6. Asher, Singleton, & Taylor, 1982.			Increasingly fewer cross-race choices from grades 6 through 12. Epstein, 1983a, b.			
					Little emphasis on race in interracial attitudes or acceptance among young children (3-8 years); increasing own-race preferance for academic and social recognition and interaction among elementary students (9-13 years) Studies reveiwed by Carter, Detine-Carter, & Benson, 1980.										
					Choice of work partners mainly influenced by sex not race of partner. Singleton & Asher, 1979.	Acceptance of blacks by whites is a consequence of black students' achievement. Miller, 1983.									
												Blacks select black friends for social needs; white and black friends for achievement recognition. Whites prefer white friends for social and achievement recognition. Carter, Detine, Spero & Benson, 1975.			
												Friendship choices related more to competence than to race. Blanchard Weigel & Cook, 1975.			
												Achievement and sex of student are more important than race in choice of friends; race is especially important to black males for social interaction. Carter, Detine, Spero, Benson, 1975.			

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Figure 5. cont. Same race and cross-race choices of friends, in the elementaty, junior high and high school grades and adulthood

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
ENVIRONMENTAL CONDITIONS					In 21% black classrooms between 94%-100% cross-race interactions were positive for male and female black and white 3rd graders. Females (not males) had more same-race interactions than expected by chance. Singleton & Asher, 1977.		In 20% black school, 6% white students chose black friends; 33% black students chose white friends. Shaw, 1973. In 40% black school, 18% cross-race choices by whites; 44% cross-race choices by blacks. Asher, reported in Asher, Oden, & Gottman, 1977.		Early cross-race contact, SES, achievement, teacher attitude, sex, and black/white ratio affect cross-race choices. Carter, DeTine-Carter, & Benson, 1980. Few cross-race adjacent seating choices in desegregated (close to 50% white) middle school cafeteria. Schofield & Sagar, 1977.		Positive grade school experiences, opportunities for contact in class, participation in school activities and family attitudes influence friendly contact and friendship relations between blacks and whites. Patchen, Davidson, Hoffman & Brown, 1977. Cross-race choices of friends is function of years of opportunity for selection in desegregated settings. McPartland & York, 1967. Extracurricular participation encourages cross-race friendships. McPartland & York, 1967. Race is a stronger barrier for selection of a friend than for selection of a work partner in school. McPartland & York, 1967.				

In 90% black school, whites make and receive fewer choices of friends or best friend. Tuma & Hallinan, 1979.

Blacks selected more best friends and chose more white friends if blacks were in minority in classroom population. Hallinan, 1982.

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Figure 5. cont. Same race and cross-race choices of friends in the elementary, junior high and high school grades and adulthood

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
ENVIRONMENTAL CONDITIONS			Cross-race social interaction (lunchroom seating and free play) increased when rewarded but returned to same-race choices after rewards were withdrawn. Hauserman, Walen, & Behling, 1973.		Need for intervention to maintain cross-race acceptance characteristic of primary grades. Singleton & Asher, 1979.				In 7th and 10th grade, students in cooperative work groups increased cross-race choices of white and Mexican-American students, but not other white, black, Mexican-American combinations. Weigel, Wiser & Cook, 1975.						
						More cross race friendship choices in environments that reward cooperation compared to individualized methods. Johnson & Johnson, 1981.		Students in Jigsaw cooperative group classes made more cross-ethnic group friendship choices than in control classes (Canada). Ziegler, 1981.	Cross-race friendships increased in environment that rewards cooperative behavior of integrated learning teams in classes from 10% to 51% black. Edwards, DeVries, & Snyder, 1972; DeVries & Edwards, 1974; DeVries Edwards & Slavin, 1978.					
		Increased cross-race choices from particular classroom conditions including openness, mixed grade levels, high interaction assignments, slightly more blacks in numbers. Bartel, Bartel, & Grill, 1973.				Black and white females make fewer positive cross-race interactions in classroom or play yard than do black and white males. Miller, 1983.									
								Students in high participatory schools make more cross-race choices than students in low-participatory settings. Epstein, 1983.							
												In cooperative learning vs. control classes students continued more cross-race choices of friends 9 months after 12-week treatment. Slavin, 1979.			

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Reports of students' dominant choices of friends often hide the facts about cross-race acceptance. Considerable cross-race acceptance of friends, teammates, and workmates was reported in the research, even though best friends were most often the same race (Asher, Oden & Gottman, 1977; Asher, Singleton, & Taylor, 1982; Singleton and Asher, 1979). In one study, about 50% of black and white students reported that they participated in out-of-school activities with students of a different race, and about 10% reported frequent participation in interracial activities. About one third of each racial group visited the home of other-race friends; in comparison, about one half of each group visited the home of same-race friends. These facts refer to the measures and population in one study, but the examples show why reseachers need to give attention to the absolute and relative rates of same vs. cross-race choices and to other variables that may be as or more important than race for selecting friends.

The prevalence of same-race choices may be overestimated and misinterpreted because of a lack of other important variables in the measurement models. Same-race choices are often explained solely by race, but the selection process is not unidimensional. Some studies have tried to determine whether race or other characteristics are the key facts for selecting friends. Blanchard, Weigel and Cook (1975) and Carter, DeTine, Spero and Benson (1975) suggested that achievement was more important than race in determining students' acceptance or friendships in desegregated settings. Race may be important for some selections (e.g. social activities) but not others (e.g. academic work groups). Miller (1983) concluded that black students' increased achievement leads to increased acceptance of blacks by whites and that achievement is more important than race in the selection and influence processes.

The results of the studies of same- and cross-race choices are interpreted differently if one is interested in predominant choices, best friends, just friends, or the acceptance and tolerance of others. Often, researchers have measured only cross-race choices of best friends without having reason to expect that students in newly desegregated schools would quickly form deep friendships. Research on adult friendships suggests that race neither determines all friendship choices nor does its importance disappear when other characteristics are considered (Laumann, 1973; Mayhew, 1970). Rather, the interplay of race (or other ascribed, surface characteristics) and achievement (or other achieved, or profound characteristics) will affect friendship selection and may be different according to age and social environment.

Environmental Conditions

School and classroom environments can be organized to maximize or minimize the importance of race as a basis for selecting and accepting other students as friends. It is what happens daily in the classroom that determines how interactions occur and how friendly or exclusionary behaviors develop among black and white students. Studies of school and classroom organizations suggest that the task and reward structures, participation structures, demographic features of the school population, and the organization of transitions to new educational levels affect students' cross-race choices of friends from kindergarten through high school.

At the elementary school level, cross-race choices increased when the teacher rewarded this social behavor and decreased when the rewards were withdrawn (Cooper, Johnson, Johnson, and Wilderson, 1980; Hauserman et. al, 1973; Johnson and Johnson, 1981). At the secondary level, cross-race choices increased when

students worked as members of integrated teams in which group progress was rewarded by the teacher (DeVries and Edwards, 1974; DeVries, Edwards, and Slavin, 1978). The cross-race choices were strong (best friends) or weak (just friends) depending on the sociometric measures used (Slavin & Hansell, 1983). Increased cross-race acceptance by older students may last longer after an intervention. For example, cross-race acceptance was maintained nine months after a 12-week intervention that rewarded cooperation by students on a biracial learning team (Slavin, 1979). Ziegler (1981) found similar, long-term acceptance of cross-ethnic group friends after cooperative learning activities in grade 6 of a Canadian school. However, Weigel, Wiser and Cook (1975) suggested that there may be some groups for whom currently available strategies for cooperative learning do not work well, especially in triethnic or multiethnic groups. Certain structural conditions in kindergarten through grade 4 increased cross-race choices, including the organization of open classrooms, mixed grade levels, high interaction rates of students on school tasks and slightly more blacks than whites in the classrooms (Bartel, Bartel and Grill, 1973). Epstein (1983b) reported that students in high-participatory secondary schools made more cross-race choices than did students in low-participatory schools.

Other environmental conditions may affect the number of cross-race choices. The history of the students' experiences in desegregated schools and classrooms; the race of the original population at the school (i.e. whether the school was predominately black or white prior to desegregation); the percent of majority and minority students in the school and in classrooms; opportunities for participation in class and extracurricular activities; and racial attitudes of the family at home are experiential and demographic factors that influence cross-race choices of friends (McPartland and York, 1967; Patchen, 1982; Patchen, Davidson, Hoffman, and

Brown, 1977; St. John, 1975). Clearly, if a school is segregated, cross-race choices of friends in school will not occur. If a desegregated school is resegregated, with black students in one classroom and white students in another, cross-race choices of friends in school are unlikely to occur unless other well-planned, desegregated activities create cohesive, integrated groups of students. The level of desegregation is a basic environmental condition that affects the extent of contact, interaction and cross-race choices of friends. For example, in a 20% black elementary school, Shaw (1973) found 6% cross-race choices by whites and 33% cross-race choices by blacks. In a 40% black elementary school, Asher (in Asher, Oden and Gottman, 1977) found 18% cross-race choices by whites and 44% cross-race choices by blacks. But, cross-race choices of best friend are only part of the story. In a 21% black third grade classroom, between 94% and 100% of all cross-race interactions were positive ones (Singleton and Asher, 1977). Thus, in-class acceptance can be uniformly positive, even if close friendship choices are not prevalent.

The length of time in newly desegregated settings is also an important factor. If sociometric measures are taken too soon after desegregation, cross-race choices will be low due to the lack of time needed to develop positive feelings of acceptance and to work through the selection process (Carter, Detine, Spero, and Benson, 1975).

Blacks tend to make proportionately more cross-race choices than whites in most desegregated settings (St. John, 1975). An increase in the proportion of the minority racial group may lead to more cross-race choices by members of the majority group. For example, when the number of black students in a school or class increased, there were more cross-race choices by whites (Patchen, 1982). The pat-

terns are neither simple nor predictable, however. In one study in which black students were in a 90% majority, white students were at a significant social disadvantage (Tuma and Hallinan, 1979); in another study in which white students were in a 90% majority, blacks and white students received about equal numbers of choices and reciprocations (Epstein, 1983b). White students' choices were less stable in predominately black elementary schools (Tuma and Hallinan, 1979); black students' choices were less stable in predominately white secondary schools (Epstein, 1983b). Hallinan (1980) reports that in minority black schools, black students increased same-race choices from the beginning to the end of the year.

The patterns get especially complicated when choices of students in sex-by-race subgroups are examined separately. For example, in one study black males but not black females made more same-race choices when the proportion of their own race increased (St. John, 1975), but in another study it was the females who made more same-race choices than males (Singleton and Asher, 1979). Miller (1983) reported more positive choices by black and white males in elementary school classrooms and play yards than by black and white females in the same settings. Schofield and Sagan (1977) found remarkably few cross-race adjacent seating choices at the middle school level. The differences in expected patterns cannot always be explained, in part because the studies do not document the school or classroom structures, rewards or punishments, teachers' practices or prejudices that have been shown to influence cross-race contact and acceptance.

Transitions to new and larger schools often instigate the regrouping of students. For example, the first major transition from home to school in grade 1 is a time of increased same-race choices of friends. In grade 1, many schools begin to group students by ability in ways that separate most black and white students.

In later transitions (e.g. from elementary to middle school or middle to high school), tracking and grouping practices often result in greater separation of black and white students. In some middle or junior high schools, for example, students are tracked by ability into very high and very low ability groups which tend to be less integrated than elementary school classrooms. This reorganization of groups may contribute to the dramatic increase in same-race choices of best friends found when students move to high schools (Epstein, 1983a,b). In high schools, tracking and grouping practices often place students in different curricula that are located in separate classrooms and even in separate areas of the school. In adolescence, too, there are new social pressures for selecting same-race friends for dating and social activities that were not of major importance to students in the earlier grades. Students' choices of friends may be greatly affected by these coincidental environmental and developmental factors.

Despite over two decades of interest in race relations and sociometric choice, comparable studies have not been conducted that clarify the selection process in desegregated settings at different grade levels and under different environmental conditions. It is not only the accidental discovery of similarities of black and white students that creates friendships, but also the opportunities structured by the school for contact, interaction, shared rewards, and purposeful cooperation on school activities that define the nature of inter-racial experiences. New research will be useful that shows first how different organizational structures in desegregated schools emphasize or minimize the importance of students' diverse skills and talents, and then how different emphases affect whether friends are chosen on the basis of extensive knowledge about others or merely on surface characteristics. Future longitudinal studies that permit students to name an unrestricted number of friends, and that allow students to distinguish between toler-

ance, acceptance, friendship, and best friendship should give better estimates of cross-race choices in school settings, and how they change over time.

SAME- AND MIXED-AGE CHOICES

Many researchers have reported that students select their friends almost exclusively from same-age peers. Although some define "peer" in terms of age, equal chronological age is not a requirement for friendship (Hartup, 1983). Equal status, the critical component in the definition of "peer," can be based on many characteristics other than age that are more pertinent to students. Figure 6 shows that at all grade levels students select some mixed-age friends, but most students select mostly same-age or same-grade friends.

Figure 6 About Here

The predominance of same-age choices of friends is partly the result of the samples and measures of selection used in most research. Most samples of students are studied in age-graded schools. The students may be asked to limit their choices to close friends in their classroom or grade, or they may be asked to check the names of their friends or best friends from a list of the members of their class or grade. Measures that specify selection categories will result in patterns of selection that reflect the restrictions. New studies that use measures to account for all friends in and out of school will provide a more accurate representaion of mixed-age choices of friends.

Developmental Patterns

A few studies permitted students to choose mixed-age friends. In naturally-organized mixed-age groups, young children selected older friends more often than

Figure 6. Same-age and mixed-age choices of friends in elementary, junior high and high school grades and in adulthood

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOPMENTAL TRENDS					More mixed-age friendships with older children by youngsters with "warm" personalities; more mixed-age friendships with younger children by youngsters with "aloof" personalities. Maas, 1968.				Among Russian secondary school students in 7th, 9th, and 10th grade, boys make 75-85% same-age choices; 13-19% choices of older friends; very few choices of younger friends. Kon and Losenkov, 1978.		80-85% of high school students choose best friends from their own grade level. Kandel, 1978. Females high in ego development (e.g. high autonomy and high awareness of others) make more mixed-age choices of friends than females low in ego development (e.g. more egocentric or conforming). Hansell 1981.				Young adults and old adults select mainly same-age friends; middle aged adults select more mixed-age friends. Reisman, 1981 Rose, 1962; Steuve and Gerson, 1977; Verbrugge, 1977.
ENVIRONMENTAL CONDITIONS	52% of interactions in school and out of school are with friends who differ in age by 12 months or more. Barker & Wright, 1955.						Boys have more mixed-age friends in their large group games. Girls have more same-age friends in smaller play groups. Lever, 1976.								Subunits of factory bring same-aged workers together. The more that same-aged workers were within a department, the more respondents' friends at the factory were same-aged. But across departments from 40-80% of friends were not same-aged. Feld, 1982.

Males are older than females in heterosexual cliques and crowds from preadolescence to young adulthood. Dunphy, 1963.

In mixed-age school organizations, students select best friends who are older and younger than themselves: Percent mixed-age choices: Grade 1-3: 82% Grades 4-6: 67% Grades 7-8: 60% Allen and Devin-Sheehan, 1976.

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older children selected younger friends (Allen and Devin-Sheehan, 1976). Adolescents more readily chose older than younger friends (Kon and Losenkov, 1978). Patterns of mixed-age choices differed for males and females. Males who played large, mixed-age group games chose more mixed-age friends than females (Lever, 1976); adolescent females chose older male friends more often than males chose females (Dunphy, 1963).

Studies of adults show a curvilinear pattern. Middle-aged adults chose more mixed-age friends than did younger or older adults (Reisman, 1981; Rose, 1962; Steuve and Gerson, 1977; Verbrugge, 1977). These patterns of selection are related to environmental conditions and social development in adulthood. Work settings (Feld, 1982) and neighborhoods (Allan, 1979) impose clear environmental conditions on populations of adult friends. Young, married adults with infants and young children spend time with their children in neighborhood playgrounds and other areas where they meet other young adults with young children. Young, working adults enter the job market with others their own age, but the ages of workers become more mixed as some move up the occupational ladder. Older adults retire and leave the work place, return to their neighborhoods or join new communities for social activities. Adults at different ages are in different environments that affect their contact and friendship with adults of same or mixed ages.

Maas (1968) suggested that students who select older and younger friends have different personalities. He compared a small sample of "warm" and "aloof" eight- to twelve-year-olds. Males and females with warm, sociable personalities more often selected older friends, whereas aloof males more often selected younger friends. In another small study, Hansell (1981) found that ego development was associated with choices of mixed-age friends. Students with high ego levels (high

awareness of others) made proportionately more mixed-age choices of friends than students with low ego levels (dependent on others; conforming). Despite the admittedly small differences between groups of students, the results of both studies suggest an intriguing link between personality and the structure of mixed-age choices.

The metric that defines same-age and mixed-age friends differs for children and adults. Adult friendships are considered "same age" if the parties differ in age up to four or five years (Feld,1982). Some adults choose friends from kin and neighbors who differ in age ten years or more from the chooser (Verbrugge, 1979). Children's friendships are considered "same age" if the youngsters are within one year of each others' ages or are in the same grade in school. The different definitions of "same age" reflect the different spans of time of childhood (18 years) and adulthood (40 to 60 years or more), and the more dramatic nature of developmental changes over short periods of time in childhood. It is clear, however, that the definition of "same age" is largely arbitrary. We know very little about how choosers consider their friends' ages, and whether and when age differences of one year, four years, ten years or more become important in the selection process.

Environmental Conditions

Most schools and classrooms and many other settings in which youngsters interact are age-graded; that is, they are purposely restricted to populations of students of the same age. In most schools, students within a grade vary in age by about 10 months or less, though some students are a year ahead or behind in age of their classmates due to promotion or retention in school. There is slightly greater correspondence in friends' grade levels than in age (Kandel, 1978). The history of children's experiences in age-graded classrooms assures the predomi-

nance of same-age/same-grade choices of friends in most schools. At the junior high and high school levels, about 80% of students' friends were in the same grade (Kandel, 1978; Kon and Losenkov, 1978).

When environments permit and encourage mixed-age interaction, however, students' selections of friends reflect their opportunities and experiences. For example, Allen and Devin-Sheehan (1976) reported that in a mixed-age school, children regularly named friends older and younger than themselves.

	% with at least one mixed-age friend
Grades 1 - 3	82
Grades 4 - 6	67
Grades 7 - 8	60

In the one-room school, 76% of the children said it was easy to be friends with children of other ages (Allen, 1976). It is unlikely that students in regular schools would make similar reports. Barker and Wright (1955) studied students' choices of friends in a variety of behavior settings in and out of school. They found that about 65% of the children's interactions were among friends who differed 12 months or more in age.

Many individual and environmental factors affect the extent of mixed-age choices. Groups vary in size, proportion of mixed-age students, and sex and race compositions. Groups vary in rates of contact and reasons for contact. Students within groups may be at different academic and social developmental levels. They may experience different levels of official or peer support for mixed-age interac-

tions. Any one or a combination of these factors can affect the number of mixed-age choices of friends. In the one-room school with only a few children of each age, more mixed-age friendships would develop than in a school with three or four classrooms of same-age children who are shepherded though their school years in separate grade levels. Even in age-graded schools, however, if only a few of the same-age students are male, more mixed-age friendships would develop because males tend to choose males over females regardless of age.

A middle school in Baltimore is organized so that students in grades 6, 7, and 8 are assigned to the same classes. The curriculum is presented in topical cycles to cover prescribed subjects over the three years in mixed-age classes. In some schools, mixed-age tutoring is organized (e.g. grade 5 students tutor grade 3 students or high school students tutor younger children in different schools). Different age mixes in tutoring programs could affect peer relations and friendship choices (Allen, 1976). These and other school practices revise age restrictions in students' contacts and may affect children's choices of friends in and out of school, and their attitudes towards older and younger students.

Many of the most basic questions about same-age and mixed-age friends have not been addressed in research. For example, what are the benefits of each type of interaction and selection? Studies of peer interactions suggest that certain kinds of behaviors may be more common with particular combinations of mixed-age peers, e.g. nurturance, aggression, and dependency with younger, same age, or older peers, respectively (Hartup, 1978, 1983; Maccoby and Jacklin, 1974). When mixed-age peers are friends, however, they may be equal in all respects other than age. Their patterns of interaction and influence may be more like same-age friends. Younger and older students may be friends because of similar interests,

levels of skills, neighborhood play patterns, or school placements in regular classes, elective courses or extracurricular activities. We need to know if and how mixed-age friends are similar or different from same-age friends across the school years and in adulthood, how their friendships are reciprocated, how they stabilize relations, and how they influence each other. If benefits from mixed-age friends in school are found, we will need to know how mixed-age interactions can be encouraged within schools and across educational levels in the organization of teaching and learning.

III. THE DEPTH OF SELECTION

RECIPROCATION OF CHOICES

This section discusses research on developmental patterns of reciprocated choices, and the features of school and classroom environments that increase or decrease the prevalence of reciprocated friendships.

Developmental Patterns

There is a general increase in reciprocation from prekindergarten to grade 3 or 4 (Rardin and Moan, 1971), and then a general leveling off, with between 40% to 55% of the students' best friends reciprocating choices (Busk, Ford and Schulman, 1973; Epstein, 1983a,b; Hallinan, 1979; Laumann, 1973; Shrout and Kandel, 1981 for rates of reciprocation across grade levels and adulthood). The rates of reciprocation are highly tentative because of the differences in samples, measures and methods of analyses used in the various studies shown in Figure 7.

Figure 7 About Here

Figure 7. Reciprocated friendship choices in elementary, junior high and high school grades and in adulthood

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOPMENTAL TRENDS			More reciprocated choices among older children's best friends. Hardin and Moan, 1971.				Cross sectional data show no significant differences in reciprocation across grade levels, but longitudinal data suggest that reciprocation of best friends increases yearly from grade 6 to 12. Epstein, 1983a, b.								43% adult male friendship choices reciprocated. Laumann, 1973.
			Increasing transitive friendship choices. Leinhardt, 1972.			45-50% of students' best friends reciprocate the choice. Tuma and Hallinan, 1979.					41% best friend choices reciprocated. Shrout & [illegible] 1981.				Adult women more likely to have reciprocated friends than are men. Reisman, 1981.
						Between 50% and 54% of choices in grades 4-8 were reciprocated with no consistent differences by grade level. Busk, Ford & Schulman, 1983.									
							Females make more reciprocated friendship chioces in grades 6-12. Epstein, 1983a, b.								
											Females make more reciprocated choices. Hansell, 1981.				
		Ages 4-9 are characterized by self-interested friendships, whereas ages 9 and after are characterized by increases in mutuality, cooperative reciprocity, and expectations for reciprocated, equal treatment. Sullivan, 1953; Youniss, 1980.													Friends who reciprocate choices are more similar in college plans than friends who make unreciprocated choices. Alexander and Campbell, 1964.
				Comparisons of students in grades 1, 4, 6, and 8 show that older friends are more helpful to each other; older students work for equality in rewards with friends. Berndt, 1981a.											
				Comparisons of students in grades 1, 3 and 5 show that older children use available information more completely and coherently in ways that increase the mutual rewards of friendships. Hartup, Brady, and Newcomb, 1982.											
ENVIRONMENTAL CONDITIONS						Assymetric dyads and intransitive triads become transitive sooner in open elementary classes. Hallinan, 1976.	More reciprocated choices in high participatory classrooms. Epstein, 1983b.								
							Reciprocations among members of a network of friends (friends of friends) may be disrupted when students make the transitions from elementary to middle, and middle to high school. Epstein, 1983a.								
							Cooperative learning procedures (10 weeks) increased reciprocated cross-race choices of friends. Hansell and Slavin, 1981.				Students similar in status in school reciprocate friendship choices more than students dissimilar in school status. Karweit and Hansell, 1983.				

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Cross-sectional studies report little difference in rates of reciprocation across grade levels (Busk, Ford, and Schulman, 1973). Recent longitudinal analyses of the choices of friends by middle and high school students showed small but consistent increases in reciprocations from one year to the next (Epstein, 1983a). On the average, taking into account the number of choices made, students increased their reciprocated choices over one year.

Reciprocated choices of friends are more stable than unreciprocated choices. At the elementary (Hallinan, 1978/79), secondary (Epstein, 1983b; Kandel, 1978), and post-secondary or adult levels (Allan, 1979; Verbrugge,1977), friends who reciprocated choice at one time were more likely to remain friends than were those who did not reciprocate choice.

Reciprocated friends are more similar (Alexander and Campbell, 1964; Cohen, 1977; Epstein, 1983c; Kandel, 1978). Karweit and Hansell (1983) reported that reciprocated friends were more similar than unreciprocated friends especially on a measure of school status. Females were more similar to reciprocated than to unreciprocated friends on all measures of family and individual status characeteristics. New longitudinal studies at several grade levels with specific measures of choice and status characteristics are needed to clarify the earlier reports.

Youniss (1980) discussed Piaget's (1932; 1959) and Sullivan's (1953) concepts of the reciprocity between friends from 6 to 14 years old. Younger children are believed to share "symmetrical reciprocity" in their exchanges of ideas and in their growing recognition of others. Among very young children, reciprocation refers to responses returned in sequence or to the simple recognition that friends are people who have their own ideas (Hartup, 1978; Youniss, 1980). Older children are thought to enter "cooperative reciprocity" in which they increase the depth of

their social exchange, consider each other's ideas, and discuss and resolve their differences. Distinctions have been made, too, between cooperative and collaborative relations between friends (Selman, 1976,1981; Selman and Jacquette, 1977), with collaboration requiring a higher order of skills than cooperation for resolving differences and solving problems. Berndt (1981) showed that older children more than younger ones are helpful and work for equality of rewards with their friends.

The theoretical and empirical studies suggest that reciprocation of time spent together in activities may be more important than the reciprocation of labels of "best friend" until children develop an understanding of the concept of reciprocated commitment between friends. Several studies point to increased communication, task-related behavior, and problem-solving skills from preschool through adolescence (Hartup, 1983; Hartup, Brady, and Newcomb, 1982). These social skills should affect the quality of students' friendships and the rate of reciprocated choices.

The type of measure of selection seriously affects the estimates of reciprocation. For example, different estimates will result if the measure of reciprocation refers to "friends" or "best friends." More friends can be reciprocated than can best friends. The extent of reciprocation will differ if the respondent is given a check list of names or is asked to write out the full names of friends. The former is easier to complete, should result in more choices recorded, and, therefore, more reciprocations. Rates may differ, too, if the respondent were asked to list or check only those friends who would surely reciprocate the choice, or who would reciprocate a friendly behavior such as an invitation to a birthday party or dinner. Very few studies have compared the rates of reciprocation that

result from different measures of reciprocation. We know little about the links between the measures used, the underlying concept of reciprocity, the ages of the students, and the environmental conditions that affect rates of reciprocation.

Environmental Conditions

Three aspects of school environments have been reported to affect rates of reciprocation. First, studies of the effects of cooperative vs. competitive instructional methods showed that students who are encouraged, rewarded and given opportunities for cooperative activities with their peers made more reciprocated friendship choices (Hertz-Lazarowitz, Sharon, and Sternberg, 1980). In one study, significantly more cross-race reciprocated choices were made in cooperative learning vs. control classes after a ten-week instructional treatment (Hansell and Slavin, 1981).

Second, open or participatory educational methods increased reciprocated choices between friends. Intransitive friendships became transitive sooner in open than in traditional elementary school classrooms in grades 4 to 6 (Hallinan,1976). Students in high-participatory secondary schools made more reciprocated choices than students in low-participatory schools (Epstein, 1983b). Students in open or high-participatory schools have more opportunities than other students to interact on academic work and are supported and rewarded for doing so. Students who are actively involved with other students should get to know more about the skills, talents, and personalities of more classmates. If students help and reward each other on academic tasks regularly, the mutual benefits they gain may lead to mutual acceptance and liking.

Third, the organization of transitions from one educational level to another (e.g.the transition from elementary to middle school, or from middle to high school), may affect the rate of reciprocations. When students change schools (e.g. from small elementary schools to large middle schools), they are organized by new grading and grouping procedures. The middle and high school students join populations that may be demographically different from the students' previous schools, and there may be many opportunities to meet other new students in curricular and extracurricular activities. A period of selecting new friends and learning the new social skills demanded by new school organizations may lower rates of reciprocation for a short time after a transition to a new educational level. Certainly, newcomers to schools at any grade level are individually affected by the disruption of their friendships in their former schools.

Cooperation, equal exchange, purposeful academic interactions, and increased understanding and similarity of friends all may promote reciprocated friendship choices. A mathematical reciprocal is the inverse of another number. If this aspect of reciprocal relations is applied to friendship, then reciprocated friends should complement each other to form a complete relationship through friendship. We know surprisingly little about how or when these different aspects of reciprocation develop in children's friendships, or how school organizations and classroom environments encourage or discourage the behaviors that promote reciprocity among friends.

STABILITY OF CHOICES

One of the most complex topics in research on children's friendships is the stabilty of relationships. Research reported in Figure 8 suggests that stability

of friendships increases as youngsters mature, but stability is also influenced by the time between the measures of selection, the types of measures used, and by school and classroom organizational features.

Figure 8 About Here

Developmental Patterns

Most research that includes students from several grade levels shows that older students have more stable friendships. This was reported in studies that compared preschool to kindergarten children (Hartup, 1975); kindergarten to grade 3 (Rardin and Moan, 1971); kindergarten to grade 5 (Horrocks and Buker, 1951); kindergarten to grade 6 (Miell and Duck, reported in Duck, Miell and Gaebler, 1980); grade 4 to grade 6 (Hallinan, 1980); grade 4 to grade 8 (Busk, Ford and Schulman, 1973); grades 6 through 10 to grades 11 through 12 (Thompson and Horrocks, 1947); and grades 6 to 12 (Horrocks and Benimoff, 1966). The regularity of the trends is impressive, but the consistency is partly a function of the short time between measures of choices (Busk, Ford, and Schulman, 1973). Most of the findings of greater stability of older students compared to younger ones were based on relatively short periods of two weeks or a few months. Over one full year, only students in grade 12 had more stable friendships than students in grades 6, 7, or 9 (Epstein, 1983a,b).

The consistent trend toward greater stability in older students' friendships is elaborated by some related findings. The classification "friend" was more stable over a six week period than the classification of "best friend" or "non-friend" (Tuma and Hallinan, 1979). Best friends who reciprocated choices had more stable friendships (Epstein, 1983b,c; Hallinan, 1979; Kandel, 1978).

Figure 8. Stability of choices in elementary, junior high and high school grades and adulthood.

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOPMENTAL TRENDS	Increasingly stable friends from toddlers to older preschoolers. Hartup, 1975.		Increasingly stable choices of three best friends, from kindergarten to grade 5. Horrocks & Buker, 1951.					Increasingly stable friends after 11-12 years old. Busk, Ford & Schulman, 1973.							Increased stability of best friends (friends for 6 years or more) high school (27%) to pre-retirement (93%). Weiss & Lowenthal, 1975.
			Increasingly stable choices from 5 to 11. Miell and Duck, reported in Duck, Miell, & Gaebler, 1980.					Increasingly stable friends over one year from grade 6 to grade 12; differences significant only for grade 12 compared to other grades. Epstein, 1983a, b, c.							
						Increasingly stable friends from grade 4 to grade 6. Hallinan, 1979,1980.		16-18 year olds more stable friendships than 11-15 year olds over 2-week intervals. Thompson & Horrocks, 1947.							
			Lack of stability of friendships of 6-8 year olds compared to 9-11, and 12-14 year olds. Youniss, 1980.												
						25% if best friends stable over 1 month. Seagoe, 1933.									
								40% same best friend after 2 weeks, Austin & Thompson, 1948.							
			Young children's cross-sex choices less stable than same-sex choices. Gronlund, 1959.			Intransitive triads more toward stability over time. Sorenson & Hallinan, 1976.						Similar students more stable friends. Kandel, 1978.			
						Reciprocated choices more stable. Hallinan, 1978/79; 1979a; Tuma & Hallinan, 1979.		Reciprocated friends are increasingly more stable friends, grades 6-12. Epstein, 1983a, b.							
												55% of 4 student cliques remain stable from fall to spring. Cohen, 1977.			
						Only 6 out of 34 cliques remained stable from fall to spring of school year. Hallinan, 1980.			Increasingly fewer "genuine," lasting friendships. Kon & Losenkov, 1978; La Gaipa, 1981.						

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Figure 8. Stability of choices in elementary, junior high and high school grades and adulthood.
cont.

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOP-MENTAL TRENDS (continued)						"Friend" more stable over six weeks than best friend or non-friend. Tuma & Hallinan, 1979.									
						Even mutual friends remain stable on average of 90 days. Hallinan, 1978/79.									
						Choices received are more stable than choices given over 8-week period. Busk, Ford, & Schulman, 1973.									
			Correlation of .8 of most- and least-liked children from beginning to end of the school year, with .63 top 1/3 grades 1-3; and .77 top 1/3 grades 4-6. Lippitt & Gold, 1959.					High rate of changeability of best friends over 1 year. One best friend among three predictable after 1 year in only 8% of cases. Horrocks & Benimoff, 1966.							
						Correlation of .50 of most-liked friends over 1 year; .40 over 3 years Correlation of .40 of least-liked friends over 1 year; .35 over 3 years. Roff, Sells, & Golden, 1972.									
		Immature concept of "reciprocity of exchange," and lack of concept of "enduring bond." Youniss, 1980.				Increased realism from age 9 in needed skills to maintain friendship stability. Youniss, 1980.		Time and experience with friends lead to more stable group membership from 7th or 8th grade on. Hrybyk & Farnham-Diggory, 1981.							Sequences of decisions, each depending on different criteria determine stability of close adult friendships. Kerckhoff & Davis, 1962.
					Increased stability of group relations coupled with increased problem-solving skills. Isaacs, 1937.										
						Development of rules for including or excluding friends, choosing and rejecting friends leads to bases for keeping friends. Douvan & Gold, 1966.									
						Increased importance of loyalty, authenticity in friends. La Gaipa, 1979.		Increased awareness of mutuality from little emotional exchange in preadolescence to intense, intimate exchange in late adolescence and adulthood. Douvan & Gold, 1966; Douvan & Adelson, 1966; Selman, 1976; Duck, 1973a.							
								Males knew their friends longer than females; females knew their friends longer than male-female dyads. Montemayor & Von Komen, 1981.							Older adults (65+) have known and kept friends longer than young adults. Steuve & Gerson, 1977.
															13% of school friends knew each other at least 5 years; 30% of adults knew friends at least 5 years. Weiss & Lowenthal, 1975.

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Figure 8. cont. Stability of choices in elementary, junior high and high school grades and adulthood.

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
ENVIRONMENTAL CONDITIONS	Less structured program creates many small groups of friends and frequent changes of groups of friends. More structured program creates one large group with focus on the teacher. Rubin, 1980.				Homogeneous grouping encourages more stable friends. Bossert, 1979.		Increased stability in more open elementary schools than traditional schools. Hallinan, 1976. Children more similar in achievement have more stable friendships. Tuma & Hallinan, 1979. Grouping practices, including being in the same reading group and spending time together in the group, increases friendship choice and stability. Hallinan and Tuma, 1978.		School participatory structure does not consistently affect stability of friendships, but transitions to new middle and high schools may disrupt stability. Epstein, 1983a, b.						Friends of long-standing are ethno-religiously homogeneous and occupationally heterogeneous, suggesting the continuation of long term friendships with high school or neighborhood friends in different occupations. Laumann, 1973.

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It is necessary to differentiate between the relative rates of stability of older and younger students' friendships, and the absolute rates of stability. In grades 3 to 8, only 25% of the students had the same best friends after one month (Seagoe, 1933). In grade 6, about 38% of the students made at least one change in their choices of three best friends over two weeks (Austin and Thompson, 1948). Most studies find a high rate of change in students' choices of best friends over time. In a three-year study of students from grades 4 to 6, choices of best-liked friends were 25% predictable after one year, and 16% predictable after three years (Rolf, Sells, and Golden, 1972). Among secondary school students, the predictability of students' choices ranged from 8% (Horrocks and Benimoff, 1966) to 33% (Epstein, 1983a,b). The differences in the reported rates may be due to a number of factors including a variety of school organizational conditions in elementary and secondary schools.

Older students tend to have more stable friendships than younger students. Nevertheless, over time, even older students' relationships are not very stable. Combinations of social, cognitive and environmental factors work against stability over the long term. Because students belong to several dyads and groups of friends, it is not surprising that some of their relationships are characterized by change and instability, realignments, and reordering of best friends.

A few studies have been conducted of the characteristics of groups of friends, the transitivity of choices and stability of relationships among three or more friends. Sorenson and Hallinan (1976) report that, over time, intransitive triads move toward stability of relationships among the three friends. The features of groups' memberships change with age. Hrybyk and Farnham-Diggory (1981) concluded that time and experience in social relations led to more stable group memberships

at around the seventh grade (age 12 to 13). More stable group memberships should support more stable choices of friends. At the elementary school level, 6 out of 34 cliques, or about 18%, remained stable from fall to spring (Hallinan, 1976). At the high school level, 55% of the cliques that existed in the fall of the school year remained stable, while 45% of the cliques disintegrated by the spring (Cohen,1977). Although there was an increase in the stabilty of older students' groups, group relations are not stable even at the high school level.

Youniss (1980) attributes the lack of stable friends of children under 9 years old to their lack of understanding of the concept of reciprocity. Others place the critical stage of development of concepts of reciprocity at age 12 or older (Piaget, 1932). Bigelow and La Gaipa (1980) suggest that after students are about 11 years old, they share more clear, normative expectations of friendship. The concept of loyalty develops at or after age 11, and adds expectations for constancy and dependability in relationships (La Gaipa, 1981; Youniss, 1980). From preadolescence on, youngsters increase problem-solving and conflict resolution skills that help them stabilize group relations (Isaacs, 1937). Rules for inclusion and exclusion develop between the ages of 8 and 11 (Douvan and Gold, 1966) and may help to stabilize interactions and selections of friends. From preadolescence on, new needs develop as a result of physical, psychological, and cognitive growth for close and intimate friends with whom ideas, goals and intense feelings can be shared (Douvan and Adelson, 1966; Duck, 1973a; Selman, 1976, 1981). The development of expectations about friendships, the translation of concepts of loyalty to behavior, and the improvement of problem-solving skills are long, slow processes. Children test, evaluate, reject, reform, and reselect friends.

Even with the development of advanced social reasoning skills, the probability of instablity of best friends continues to be high, even in adulthood (Allan, 1979; Hauser, 1982; Kerckhoff and Davis, 1962; Laumann, 1973; Verbrugge, 1977). Stability is neither typical nor required for best friendships across the life span.

Another aspect of stabilty is measured by asking individuals how long they have known each other, and whether they have ever previously classified each other as best friend or as friend. Using this type of measure, Weiss and Lowenthal (1975) found that 73% of school friends (vs. 30% of adult friends) had known each other for at least 5 years. (See also, Montemeyer and Van Komen, 1981, and Steuve and Gerson, 1977, for studies that attended to length of time high school and adult friends knew each other.) Of course, some schools have high rates of student turnover, and some adult communities are very stable. By using measures that ask only for names of friends, we overlook the longevity of contact and familiarity among school children, and underestimate one aspect of stability of relationships. The preselection process of gathering and storing information about potential friends is part of the history of selection of friends. Preselection probably leads to "better" choices and more stable choices of friends over time. The length of time friends have known each other and the histories of selections should be useful additional measures in new research on stability.

A different measure is the stability of social positions in student populations. Some students receive choices as friends or best friends, or are nominated for positive or negative social characteristics, even though they are not always chosen or nominated by the same people. For example, the choices received over an 8 week period were more stable than the choices made over the same time (Busk,

Ford and Schulman, 1973). Popularity is relatively stable even though individual choices of best friends are relatively unstable. Lippitt and Gold (1959) reported high correlations from the beginning to the end of the school year for most-liked and least-liked students, with the correlations ranging from .6 in grades 1 to 3 to .8 in grades 4 to 6. Continued sociability or acceptance may be more important than the stability of particular friendships for the development of some positive attitudes and behaviors that are assumed to result from social interaction.

A basic question is whether increased stability early in the school years has positive or negative effects on students' social and academic development. Although many assume that stability is a good quality of friendship, Epstein (1983c) showed that this is not necessarily the case. Students with initially low-scoring friends who kept those friends over one year had lower self-reliance, less ambitious plans for college, and lower report card grades than students who selected no friends in school. Thus, stability of certain friendships may affect student development in negative ways. Stability of some friendship may be detrimental for particular outcomes, especially outcomes that are expected to change with age.

Environmental Conditions

Several environmental factors may affect the stability of children's friendships. Grouping practices that are based on the similarity of students are one type of school factor that may increase choices of friends who remain friends over time. Bossert (1979) suggested that homogeneous grouping increased the stability of elementary students' friendship. Tuma and Hallinan (1979) documented that children who are similar in achievement (whether or not they are homogeneously grouped for instruction) had more stable best friendships.

Schools' grouping practices (such as homogeneous ability groups) may hasten the development of stable social group memberships because the school policies create and maintain the students' groups for most of the school day. One important question is: What is the price paid in breadth of associations, tolerance of others, awareness and understanding of different strengths and weaknesses when group memberships are fixed by tracking or grouping procedures early in students' school years?

Another environmental condition that affects the stability of students' friendships is the organization of transitions from elementary to middle or junior high school, or from junior high to senior high school (Elder, 1969). At the transition points some students and their friends change to different schools. Or, students may meet new friends in the larger populations of the new schools. Sometimes adults plan their own transitions to new jobs to coincide with their children's school transitions so that the children will have an easier time making friends at a point when all students are reassigned to new schools (e.g. at the start of junior high or high school). Epstein (1983a,b) found that stability of friendships increased when the students and their friends remained in the same school environment. In that study, students in Grade 12 were in the same school for at least two years, but this was not the case for students in grade 6 and for some in grade 7 who were moving to new middle schools, or for students in grade 9 who were entering new high schools.

Outside of school, children's games establish environments that may influence stability. Lever (1976) suggested that boys' larger groups for games lead to more stable group relations. Even when best friends change, they may change among the same group members. Best friends may not be as easily exchanged or replaced by girls whose play groups are smaller, often dyadic.

We have some evidence, then, that older students have more advanced concepts of friendship and more stable friends, and that environmental factors also increase or decrease the likelihood of stable friendships. The effects of age and environment, confounded in early studies, must be separated in future research.

The shorter the time between measures, the more friendships will appear stable. The broader the measure (e.g. friends vs. best friends), the more friendships will appear stable. The less the environmental disruption, (e.g. students remaining in the same school over the time when selections are measured), the more friendships will appear stable. Little is known about the stability of students' memberships in multiple groups of friends, or about the benefits and disadvantages that result from stable or unstable friendships. Little is known about how environmental conditions and life history events affect the stability of friendships. The stability of children's and adults' friendships is affected by the development in each friend of concepts of friendship and of social skills that can be used to resolve conflicts so that friendships can continue. Stability is also affected by the structured, natural upheavals that are part of the life course, and by day to day factors that determine the regularity or disruptions in patterns of contact and exchange. We know little about how disruptions affect friendships at different ages, or how are they buffered or intensified by differently organized schools, classrooms, and other environments.

SIMILARITY OF FRIENDS

One of the continuing debates about patterns of selection is whether friends are chosen for their similarities, complementarities, or differences of attitudes, behaviors, statuses, and goals. Does similarity lead to choice, reciprocity and stability, or to boredom and competition in relationships? Do differences lead to

conflict and rejection, or to excitement and enhancement in relationships? Are similarities and differences in friends given more or less prominence in differently organized classrooms? Similarities, complementarities, and differences are especially important characteristics for research on children's friendships because the degree of similarity between friends may be tied directly to the direction and extent of influence of friends on each other's attitudes and behaviors.

Developmental Patterns

Figure 9 suggests that students select ever more similar friends. Similarity of friends from age 12 to 16 was greater than the similarity of random pairs of students (Duck, 1973b). Studies using longitudinal data show clear increases in similarities of students and their friends over time. Kandel (1978) reported several important patterns of similarity in friendships. Students were more similar to new friends than to friends they dropped; friends who were picked as new friends were already similar to the chooser prior to selection; and friends became more similar from fall to spring of the year. Similarity increased most among friends who made stable and reciprocated choices.

Figure 9 About Here

Cohen (1977) studied socialization and selection patterns in high school students' cliques of four members or more. He found that clique members were more similar to each other than to other students on 18 attitudes and behaviors, with several of the differences significant. New members in cliques became increasingly similar to original members in their attitudes and behaviors.

Figure 9. Similarity and complementarity in the selection of friends in elementary, junior high, and high school grades, and in adulthood

Grade	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
DEVELOPMENTAL TRENDS	From 6 to 13 years old, friends are perceived as more similar than proven in objective measures. Davitz, 1955.														Perceived similarity greater than actual similarity of preferred friends. Fielder 1954.
						From grade 4-12 friendship choices are a linear function of perceived similarity in attitudes. Byrne and Griffitt, 1966.								
						Students report they would like hypothetical others who are supposed to like the same things they do. Byrne and Griffitt, 1966.								
					9-year old friends are more similar in social maturity than in IQ. Furfey, 1929.						Similarity of grade level, and sex (over .8 correlation of self and best friend), and race (over .6 correlation of self and best friend). Kandel, 1978.				College students are similar to their friends by social type, and on many traits that typify social type. Newcomb, 1961.
										Among 12, 14 and 16 year olds, similarity of friends is greater than similarity of random pairs. Friends are similar on different characteristics across age groups. Duck, 1973b.				
		Kindergarten children are more concerned with "self" than with "similarity" in comparison with children in grades 3, 7, or high school. Peevers & Secord, 1973.									Similarity is greater among reciprocated friends. Kandel, 1978.				Homogeneity clearest for first-named best friends of adults. Verbrugge, 1977.
	Similarity of popularity makes it easier for children to gain entry into new groups. Dissimilar status or unpopularity lead to "hovering" behavior characteristic of newcomers. Gottman, 1977; Putallez & Gottman, 1981.				Similarity of friends is found on many measures of location, physical characteristics, and personal attributes. Seagoe, 1933.						Similarity increases among stable, reciprocated friends; new friends are more similar to chooser than friends who are dropped. Kandel, 1978.				Group membership increases positive feelings and exchange among adult group members. Tajfel & Billig, 1974.
					Complementarity in selection of friends due to personality factors found for "aloof" boys (selecting and interacting on the basis of domination over friends), and "warm" boys (selecting and interacting on the basis of sensitivity to others' needs). Haas, 1968.						Strength of friendship influences how similar friends are in their use of marijuana. Shrout and Kandel, 1981.				
											New selections of clique members increasingly similar. Cohen, 1977.				
								Current friends are more similar than friends chosen one year earlier on a variety of school attitudes and behaviors. Epstein, 1983b, c.							
											Students who like math and science in school select friends who like to spend out-of-school time sharing math and science activities. Keeves, 1972.				

continued...

Figure 9. cont. Similarity and complementarity in the selection of friends in elementary, junior high, and high school grades, and in adulthood.

Grade PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Adult
ENVIRONMENTAL CONDITIONS					Similar learning environments (same reading group in same teacher's classroom) promote friendship choice. Hallinan and Tuma, 1978.					School policies that separate groups of students by grade, curricular tracks, or extracurricular activities create groups of students who are similar on specific characteristics; friends are selected from these prestructured groups. Hansell and Karweit, 1983; Karweit, 1983; Karweit and Hansell, 1983.				Adult men choose friends mainly from the same level white and blue collar occupations as their own. However 20-30% white collar workers choose blue collar friends; 28-32% blue collar workers choose white collar friends. Hauser, 1982.
							School practices and teaching methods that encourage students to work with other students increase students' information about who is similar or different on a variety of attitudes and behavior. Epstein, 1983.							
							School policies and teaching practices can alter the importance of similarity of students for the selection of friends. Similarity of status is less important in high-participatory schools. Epstein, 1983.							
										Cross-curricular choosing (dissimilarity of track placement) increases with students' participation (similarity of interests) in extracurricular activities. Karweit, 1983.					Social structure of adult occupations puts similar workers together. Friends are selected mainly within these work settings. (Feld, 1982; Steuve and Gerson 1977.
														Adults tend to choose multiple friends from the same setting -- family neighborhood, or workplace. Verbrugge, 1979.
														Similarity of religious and economic attributes in adult friends, but equally important tendency for diversity among friends across occupational and ethnic religious groups. Laumann, 1973.

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Epstein (1983c) reported that students' friends were more similar than friends selected one year earlier on several academic and nonacademic measures. This was especially true for students in grades 6, 7, and 9. By the time they were in grade 12, students' current friends were not much different from their earlier friends in personality (self-reliance) or in school success (report card grades). Even at grade 12, however, current friends continued to be more similar than earlier friends on college plans, achievement, and attitudes toward school. In all three of these longitudinal studies, the increased similarity was partly due to the selection of new and more similar friends, and partly due to friends' influence on particular outcomes so that they became more similar as they continued their friendship.

Youngsters increasingly become aware of their own and others' characteristics, preferences, values and goals. They select friends on the basis of their current estimates of how they and their friends are similar or different. Young children select friends without much thought about the characteristics of others. Older children become concerned about their similarities to others and others' similiarities to them (Peevers and Secord, 1973). Epstein (1983a) showed that from grades 6 to 12 children made more discriminating interpretations of their own and others' behaviors. The changes in students' perceptions of themselves and others may help to explain why older students' choices are more selective and their similarities with friends more clear. Young children and their friends may become dissimilar on certain attitudes and behaviors if their cognitive and physical development proceed at different rates. One friend may crystallize personal goals sooner than another. The new discrepancies lead either to acceptance of differences, to influence attempts, or to the dissolution of friendships and the selection of new friends.

The strength of friendship is an important factor in the similarity of friends. For example, first-named friends were more similar than later-named friends among students (Epstein, 1983a) and adults (Verbrugge, 1977). Among adolescents, best friends were more similar than other friends on attitudes and behaviors concerning drug use (Kandel, 1978). Among adults, men more often preferred friends who like to do the same things and more often preferred to do activities with their best friends. Women preferred friends who think or feel about things the same way they do, and more often preferred to talk with their best friends (Caldwell and Peplau, 1982; Wheeler and Nezlek, 1977).

Similarity is both a subjective and an objective characteristic of friends. Children (Davitz, 1955) and adults (Fiedler, 1954) perceive or report greater similarity between themselves and their friends than is objectively the case. The perception of similarity may be as important as its reality (Byrne and Griffitt, 1966). Because respondents tend to report that their friends are similar to themselves, researchers must measure the characteristics of friends directly, and not rely only on the respondents' reports about their friends. Because respondents increasingly select similar friends, longitudinal data are needed to establish the nature and extent of influence at different ages and under different environmental conditions.

Environmental Conditions

School and classroom environments may be organized to emphasize the similarities or differences among students. These emphases may influence the importance that students place on similarity as a criterion for selecting friends. For example, many schools separate students into groups that are similar in achievement (tracking); sex (same-sex schools or activities in schools); race (segregated

schools or resegregated classrooms); age (grade levels); and other interests or abilities (in sports and activity programs). Other schools purposely create heterogeneous groups in multi-ability or integrated activities.

Bossert (1979) observed that teachers who grouped students homogeneously taught their students to choose similiar friends to work with in class. The students' choices of friends in class carried over to their choices of friends in play activities. When they changed teachers, students appeared to alter their friendship choices to meet their new teachers' philosophies. Students selected more or less similar friends based on the teacher's emphasis on homogeneous or heterogeneous group activities.

Some school organizations place different emphases on particular status criteria. High SES or high achievement may or may not be considered important indicators of high status depending on the school's grouping practices, course offerings, extracurricular activities and services, and teachers' attitudes and practices. Epstein (1983a) found that in high-participatory schools there was less emphasis on certain standard criteria of status (such as college plans and parents' socioeconomic status) than in more traditional, low-participatory schools.

The similarity of settings (shared experiences and rewards with others in proximity) is most important for young children. Hallinan and Tuma (1978) noted that being in the same teachers' classroom and in the same reading group working together for long periods of time each day fostered friendship and stability of friends among elementary school students. At the secondary school level, being in the same teacher's classroom was more important for younger, middle school students than for older, high school students whose schedules more often disperse

friends among many classrooms. Low-status students in high-participatory schools selected more high-status friends than in low-participatory schools (e.g. students low in SES select significantly more high SES friends; students with no plans for college select more students with college plans).

The tracking policies and the extracurricular offerings in schools influence whether students and their friends are likely to be similar in academic orientation, talents or interests. About 75% of students friends were chosen from their own curricular track, and most friends were located in the same extracurricular activities (Hansell and Karweit, 1983; Karweit, 1983). Students' interests in school can lead to the selection of friends who share those interests during out-of-school time. Keeves (1972) found that students who like math and science in school select friends who have similar attitudes and who spend time together in math and science activities at home. The link between selection and maintenance of attitudes and behaviors is suggested by these data.

Among adults, similarities of friends have been studied in colleges (Newcomb, 1961), in work places (Feld, 1982; Hauser, 1982; Laumann, 1973) and in neighborhoods (Allan, 1979). The environments in which adults learn, work, and conduct leisure activities may emphasize particular similarities or differences among members, and affect the selections of friends (Tajfel and Billig, 1974).

Similarity is often equated with high support, low conflict, mutual rewards, self-confirmation, and positive social development. Some suggest, however, that quarreling, tension, aggression and competition may strengthen friendships (Berndt, forthcoming; Hartup, 1978; La Gaipa,1981). We know little about how different school organizational procedures (e.g. grouping practices, competitive contests, cooperative learning, individualized instruction, tutoring practices,

etc.) promote the acceptance or rejection of similar or dissimilar students as friends.

The research reviewed in Figure 9 suggests that teachers' methods of instruction can accentuate or minimize differences in students' statuses, appearances, opinions or attitudes. Different designs of tasks, rewards for interaction, and rates of students' participation in decisions can determine which students will work together, on what tasks, for how long, for what reward, and can affect which students become friends in school. Teachers select classroom management strategies that encourage or discourage discussion, debate, negotiation and resolution of conflict among students in a classroom or other school setting. When these behaviors are encouraged, students may become more aware of each others' similarities or differences in ways that encourage new friendships to form.

Similarity: One important link between selection and influence.

School environments can play an important part in determining the similarities and differences of the students who interact in school by the way students are assigned to the school (e.g. in desegregation plans); to classrooms (e.g. by ability, by interests, by success in school, by race and sex); to other school activities (e.g. by the number of different extracurricular offerings and the prerequisites for joining them). Within classrooms, the teachers' organization of instruction brings similar or different students in contact for cooperative or competitive tasks, for active or passive learning. Students select most school friends from the groups that are established by school policies or practices. Schools create groups of similar or diverse students, place them in proximity, create opportunities for interaction, reward the interaction of similar or different students, and affect the selection of friends. Thus, the organization of

similarity in the school and classroom links the selection of friends to the influence process.

Cohen (1983) discussed the lasting consequences of selection that occur because of the link between the selection and influence processes. He argued first that selected friends have greater influence than unselected peers. His literature review illustrated how settings and environments affect the types of friends that are selected and the similarity of those friends. Cohen suggested that similarity affects the influence process -- with friends either "anchoring" their already similar attitudes and behaviors, or changing important attitudes and behaviors on which they differ.

Epstein (1983c) demonstrated with longitudinal data the predictability of patterns of change or maintenance of friends' attitudes and behaviors. She found that similar friends changed least over time; they maintained their attitudes and behaviors more than dissimilar friends. For example, similarly high-scoring students and their friends remained high and similarly low-scoring friends remained low over one year on several measures of attitudes and achievements. Dissimilar friends changed most over time. Initially low-scoring students with initially high-scoring friends changed in a more positive direction than other students. Initially high-scoring students with initially low-scoring friends changed in a more negative direction than students with similar friends. The selection of friends who were similar or different on several measures was a key factor in the direction and degree of friends' influence over one year. Low-scoring students were especially disadvantaged by the selection of similar friends on particular outcomes.

Important questions can be raised about which student is more influential in changing a friend's attitudes or behavior. Friends who are or become dissimilar and who are unsuccessful at influencing each other to become similar on important outcomes, may dissolve their friendships or reduce the intensity of their commitment (e.g. a best friend becomes a friend, a friend becomes one of the general group of peers, etc.). The dissolution requires the selection of new friends, or the elevation of other friends to "best" friend, based on new estimates of the similarities and differences in their own and others' behaviors.

IV. SUMMARY AND DISCUSSION

Three aspects of selection were examined -- the facts of selection, the surface characteristics of selection, and the deep characteristics of selection. The three aspects were arranged in a heuristic not a temporal order to allow the discussion to flow from spare facts to elaborate conditions of selection. Information on the number and proximity of friends tells whether and where students are connected to other students. These facts raise questions about which students are selected as friends. Surface or ascriptive characteristics such as sex, race, and age tell which students are attracted by others' visible features that match or differ from their own. Information about who is selected leads to questions about how students develop the quality of their friendships, and how they keep or change the friends they select.

Similarities and differences of friends link the selection and influence processes. Similarities can <u>lead to</u> selection of friends and can <u>result from</u> the selection of friends. Students choose friends who are similar on some characteristics and different on others. The friends may focus on their similarities and

work to maintain attitudes and behaviors. Or, the friends may focus on their differences and try to influence each other to change attitudes or behaviors. Or, the friends may find they cannot build a lasting relationship, dissolve their friendship, and select new friends to start the selection and influence cycle again.

The facts, surface characteristics and deeper qualities of selection were studied to learn whether patterns of selection changed with age and under different environmental conditions. Three conclusions can be drawn from the charts of life course changes in selection of friends:

1. There are important developmental patterns in the selection of friends.

The patterns of selection of older students are significantly different from those of younger students. On the average, older students choose fewer best friends, but more friends and acquaintances; make their choices within wider boundaries; increase their cross-sex choices, but decrease their cross-race choices; move toward more mixed-age choices; reciprocate more choices; make more stable choices; and increasingly choose friends similar to themselves. The facts, importance of surface characteristics, and deeper qualities of selections change with age and with the development of more mature social cognition.

Research suggests that the developmental patterns are due, in part, to the advancement and accumulation of students' cognitive and social skills. Selections reflect students' increasing abilities to make more accurate estimates of their own and others' personalities and the demands of friendship, and are better able to deal with stresses and disruptions in friendship. The research results suggest that in their patterns of selection, youngsters move from self-interested choices

and limited commitments to friends, to awareness of themselves as members of groups, and to deeper commitments to particular friends.

2. There are important environmental patterns in the selection of friends.

The basic characteristics of environments affect the selection of friends. For example, one-room schools, age-graded classrooms, black or white neighborhood schools, or single-sex schools or colleges create predictable patterns of same- or mixed-age, same- or cross-race, same- or cross-sex choices of friends, respectively. Of course, the basic characteristics of environments may change. One room schools may be expanded, segregated schools may be integrated, single-sex schools may be made coeducational. The patterns of selection that were all but guarenteed under an earlier organizational scheme will change.

The natural changes in environments affect friendship choices. For example, high schools are usually larger than elementary or junior high schools, and so students come into contact with more and different students who may become new friends. Compared to elementary school, high schools typically require more self-direction and permit more self-selection into courses, classes and extracurricular activities. When students make these choices, they join others who are similar in achievements, goals, or interests, and increase the likelihood of selecting friends who are similar on some important characteristics. High schools establish structures such as extracurricular activities, dances, and rallies that encourage heterosexual interaction and, thereby, support the development of more cross-sex friendship choices by older students.

The natural changes in school organization often occur simultaneously with the cognitive, social and physical developments in youngsters. Because the develop-

mental and environmental changes may be concurrent, it is necessary to conduct research on the selection of friends by students across the age range who attend differently organized schools or classes within schools.

3. School and classroom environments can be revised or redesigned in ways that change the expected patterns of selection.

Schools and classrooms can purposely change the way they (a) distribute demographically diverse populations of students to schools and to classrooms; (b) set grouping or tracking policies in schools and in classrooms; (c) establish curricular and extracurricular offerings and prerequisites; or (d) design the task, reward or authority structures of the instructional program. The results of studies of environmental effects on selection suggest that the demography, grouping policies, academic and extracurricular offerings, and classroom task, reward and authority structures are four manipulable or alterable conditions in schools that affect which students come in contact, why they interact, which interactions are rewarded, and who becomes friends. For example, selections were affected by contrasting demographic characteristics in schools and classrooms (e.g. the percent minority and majority students affected cross-race choices); tracking and grouping practices (e.g. students selected friends mainly from their same curricular tracks and classrooms; students had more stable friendships with others from their same ability groups); extracurrcular activities (e.g. students selected friends from the same clubs, teams or activities); cooperative tasks and rewards (e.g. students reciprocated more friends if they worked cooperatively with them on learning tasks; students made more friends if they were rewarded for cooperative behavior); and participatory organization (students made and reciprocated more friends, selected friends from wider contexts, and selected friends with more diverse sta-

tus characteristics if they were in high-participatory classrooms). Most of these findings from research have not yet been developed into useful knowledge or practices for or by teachers. Rarely do teachers purposely manipulate classroom structures in order to maximize the positive effects of peer and friendship groups in their classrooms.

In general, participatory structures--whether in cooperative learning, open education, project-oriented, child-oriented, multi-ability, or other high-participatory classrooms--enable students to work together often, without continuous, direct supervision from the teacher, ask each other questions, give assistance, and gain shared rewards. These conditions help students learn more about other students, and may increase the number of students who are accepted as friends and reduce the number of students who are isolated or unselected. Studies are needed on how selection processes in contrasting environments affect a variety of outcomes such as tolerance, helpfulness, leadership, problem-solving, sportsmanship, and empathy--outcomes that, in turn, affect how students make friends.

Environments encourage wide or narrow contacts. Differently organized schools and classrooms reward, ignore, ridicule or punish cross-sex, cross-race, and mixed-age choices, or choices by students who are different from each other on particular characteristics. Environmental effects were reported for numbers of friends, numbers of isolates, cross-race, cross-sex, and mixed-age choices, reciprocity, stability, and similarity of friends. The patterns of environmental effects begin to explain why children of the same ages differ in their rates and directions of social development, and why children and adults differ in their friendship behaviors. A life-course approach in research on the selection and influence of friends must attend to environmental factors that occur naturally in the course of development or that are imposed by design.

New topics for research on selection.

Vast gaps in our knowledge about even the most popular, well-covered topics of friendship selection can be filled only with rigorous examinations of developmental and environmental effects on the selection and influence of friends. Many (even most) of the entries on the figures in this paper are inconclusive or unconfirmed. Several topics in addition to those mentioned in each section are candidates for important new research.

1. Types of selections at different ages and in different environments. One direction for research on selection concerns the types of selections that students make. Aristotle defined three categories of friendships (friends for pleasure, utility, virtue). In more recent discourses, Elder (1969), Glidewell et al. (1966), and Schmuck (1978) discussed various functions of friendship. Using their own terminology, they each differentiated among selection for affiliation (acceptance and liking), power (influence), and accomplishment (achievement, competence or mastery). Students choose others as friends, leaders and instructors. These choices may be based on criteria that vary with age and environments. The patterns of selection of best friends (affiliation and liking) reported in this paper may not be the same as patterns of selection of leaders or work partners (cf. Bartel, Bartel and Grill, 1973; Carter, Detine, Spero, and Benson, 1975; Singleton and Asher, 1979; McPartland and York, 1967). For example, in comparison with students in schools that limit the number of high achievers or restrict the kinds of achievements that are rewarded, students who attend schools that encourage many students to display and share diverse skills and talents should have different and more diffuse patterns of nominations of competent or influential friends.

2. The profound characteristics of selection. Patterns of selection based on abilities, attitudes, interests, behaviors, values, goals will differ from those based on the surface characteristics -- sex, age, race. The surface characteristics have been given major attention in prior research, but new research must be conducted on characteristics that may override or interact with the visible features of friendships at different ages and in differently organized environments.

3. Links between selection and influence. Research suggests that similarities and differences of friends affect the extent and direction of friends' influence. Other selection criteria may also be linked to influence. For example, the number of friends may affect how a student is influenced, and how often. With a few friends, a student may be open to concentrated and predictable influence; with many friends, a student may be open to greater quantities of peer pressure on many topics. Or, with many friends, influence on any one topic may be diluted if competing ideas are exchanged among the students. The surface characteristics of friends also may affect patterns of influence on particular attitudes and behaviors. Students with several cross-sex or cross-race friends may be influenced by their friends to develop different attitudes and abilities from students with no such friends. These may include attitudes directly related to the characteristics of their friends (e.g. more positive racial attitudes, or profeminist attitudes) or attitudes related to the diversity of their experiences (e.g. tolerance, leadership, and problem solving in heterogeneous groups). The influence process that results from selection may be different in contrasting environments. Indeed, the selection process is complex, but longitudinal studies of aspects of selection and reselection will improve our understanding of how friends influence each other.

4. Historical effects on patterns of selection. Social and historical events can affect patterns of social exchange and selection (Elder, 1980). For example, the increased acceptance of day care facilities in the 1970s and 1980s has changed the environments in which preschool children meet and interact. Studies of preschoolers' social behavior in day care centers will yield new and different information about the friendly behaviors and friendship choices of very young children, compared to earlier studies that were conducted in laboratories where mothers and children or pairs of preschoolers interacted.

Similarly, the introduction of open schools in the 1960s and 1970s changed the ways elementary and secondary students were permitted or required to interact in classrooms on academic tasks. Patterns of selection were not the same for students in all schools because some schools had altered the organization of social exchange among students in classrooms. Research conducted during that period showed that even without labels like "open" or "traditional" education, schools and classrooms varied in the ways their authority, reward, and task structures encouraged or prevented students' interaction with other students. Researchers are now required to measure school and classroom environments in order to fully explain patterns of selection.

The civil rights movement of the 1960s and court actions of the 1970s raised expectations for better race relations among students in desegregated schools and changed the way children's friendships were monitored. The race of the students became an important variable along with the students' histories of attendance in desegregated schools. Today, desegregated schools are considered ineffective if race relations are poor, and researchers are counseled to measure a range of outcomes from tolerance to close friendship in desegregated settings.

New research is needed that clarifies how historic events and social movements change social settings and change the way we measure and understand children's and adults' social relationships.

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